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For Index to Advertisements see pages 47* and 48*.

TRADE



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BRIGHTON SELTZER,

Per 2s. 6d. doz.

SIX DOZEN CARRIAGE FREE.

Special Terms for Quantity.

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WHOLESALE AND EXPORT ONLY.

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CYANIDES OF POTASSIUM,

For Gold and Silver Plating and Photography.

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REFINED CAMPHOR.

AND ALL DESCRIPTIONS OF CHEMICALS FOR MEDICAL, PHOTOGRAPHIC,
ANALYTICAL, AND GENERAL USE.

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9 Vere Street, W., and 5 St. Paul's Churchyard, E.C.,

LONDON.

SOLE PROPRIETORS OF THE

Doré Transparent Glycerine SOAP.

(REGISTERED.)

Size D 1, 2d. Tablets.

In Wood Boxes of 3 dozen each	...	...	...	...	...	...	...	15/- gross.
" " 6 " "	...	...	...	...	...	...	...	14/- "
In 6d. Boxes, 3 Tablets in a Box	...	...	...	...	...	...	...	4/- dozen.

Size D 2, 3d. Tablets.

In Wood Boxes of 3 dozen each	...	...	...	...	...	...	...	23/- gross.
" " 6 " "	...	...	...	...	...	...	...	22/- "
In 9d. Boxes, 3 Tablets in a Box	...	...	...	...	...	...	...	6/- dozen.

Size D 3, 6d. Tablets.

In Wood Boxes of 3 dozen each	...	...	...	...	...	...	...	31/- gross.
" " 6 " "	...	...	...	...	...	...	...	30/- "
In 1/- Boxes, 3 Cakes in a Box	...	...	...	...	...	...	...	8/- dozen.

Size D 4.

In Wood Boxes, 3 dozen in a Box	...	...	...	...	...	...	...	46/- gross.
" " 6 " "	...	...	...	...	...	...	...	45/- "
In 1/6 Boxes, 3 Cakes in a Box	...	...	...	...	...	...	...	12/- dozen.

BARS, 5/6 and 11/- per Dozen.

(Packed in Boxes of 3 dozen small, or 1½ dozen large size.)

SHAVING STICKS, in neat foil-lined cases, 4/6 & 9/- per doz. } Retail,
SHAVING CAKES, in neat foil-lined cases, 4/6 & 9/- per doz. } -/6 & 1/-.

N.B.—5 per cent. Discount for Cash with order from above Prices.

THE HIGHEST HONOURS AWARDED AT
PHILADELPHIA, 1876. — AMERICAN INSTITUTE, 1877. — PARIS, 1878.

PETROLEUM **VASELINE** JELLY.

"Novelty, great value in Pharmacy, unequalled purity, and superiority of manufacture."

"VASELINE is an article of great merit for medicinal and toilet uses, and deserves the patronage of the Profession."

"VASELINE, and the products of VASELINE, have FULLY MAINTAINED their superiority, and having received the SILVER MEDAL of the Institute in 1875, the MEDAL of SUPERIORITY is now awarded."

Endorsed by the *entire* Medical Press of England, America, France, &c., &c., and recommended by the Medical Profession throughout the world as the best basis for Ointments and for use in Medicine, Surgery, Ocular Therapeutics, Dressing of Wounds, and Obstetrics.

The best Emollient yet discovered: used in all Hospitals and Dispensaries, and acknowledged to be one of the most important recent additions to Medicine.

WHAT IT IS.

Vaseline is a dense oleaginous substance, of the consistency of butter or jelly; it melts at 94° Fahrenheit, evaporates at about 500° Fahrenheit, does not crystallise or oxidise, and will *never become rancid*. It is a chemically pure Hydrocarbon, without admixture, is perfectly neutral, has neither odour nor taste, and is in colour a light translucent opal. It contains no chemicals of any kind, none being used in its manufacture; not being a *distillate*, it contains no *paraffine*.

SEPARATE PRODUCTS.

Vaseline and Paraffine are separate and distinct products obtained from the same base by distinctly opposite methods of treatment, just as butter and cheese are both products from milk. Vaseline is the *oily or buttery petroleum itself*, highly concentrated and purified by innocuous filtration, while Paraffine is a distilled cheesy *extract* or curd of Petroleum refined by chemical treatment.

HOW DISTINGUISHED.

Every Pharmacist knows that it is impossible to make a satisfactory homogeneous ointment by mixing with a lard which is "grainy." Paraffine adulterations, or imitations of Vaseline, may be distinguished by their odour, taste, and by the grainy or crystalline structure, which is very evident to the eye when compared with the jelly-like smoothness of pure Vaseline.

DISTILLATES DANGEROUS.

It is a well-known fact that the distillates of Petroleum are poisonous when taken internally, and it is also proven that the residuum of Petroleum filtered by the Chesebrough process are perfectly harmless when introduced into the system.

Dr. GALEZOWSKI, of Paris, says:—"I have experimented with it for four months on over 1,000 patients, and the results have far exceeded my expectations. I have had large quantities of ocular pomades prepared with vaseline, and have employed them in my practice with great success, and I consider vaseline a very valuable preparation for ocular therapeutics, and that it should *absolutely replace* all the excipients which are used at present, such as fresh butter, lard, glycerine, and glycerole d'amidon, &c."

Dr. GEORGE CAMUSET, of Paris, says:—"I am absolutely in favour of the substitution of vaseline for all the fat bodies now used, as well for an excipient as for a lubricating material, and I should like to use it especially for all pomades having a metallic oxide base."

Dr. A. BARDELEBEN, Dean to the Faculty of Medicine at the Berlin University, says:—"The results thus far have been very satisfactory in all cases where usually glycerine is applied, and have even surpassed the effects of the latter remedy, as vaseline has never in any way irritated the skin, which is so often the case with glycerine."

Professor Dr. EULENBERG, Director of the Pharmacological Institute, University of Greifswald, Jan., 1877, says:—"Vaseline is, on account of its physical chemical properties, to be recommended as a base for ointments, suppositories, &c., while vaseline cold cream, pomade vaseline, and vaseline camphor ice for cosmical purposes seem to be very excellent."

M. GALT, Pharmacien at Nancy, says, in the *Revue Medicale de l'Est*:—"Vaseline combines perfectly with fatty bodies, and has the property of rendering them inalterable. It is employed in the preparation of pomades difficult of preservation, mercurial ointment, and all pomades having a metallic base. It fills the requirements for external applications much better than any other vehicle, being soft, unctuous, and not at all irritating. It is used for the extraction of the essential oils, resins, the alkaloids, &c., in fact for dissolving certain products of the aromatic series, such as benzoic and salicylic acid, camphor, phenol, &c. &c. As a proof that vaseline is harmless, it is administered in Germany internally, in certain affections of the respiratory organs."

The following exquisite Toilet Articles are made from Pure Vaseline, and are recommended as superior to anything heretofore introduced:—

POMADE VASELINE,

Bottles, 3 sizes, 8s., 16s., and 33s. per dozen, with fancy card cases in boxes of one dozen and half dozen.

VASELINE COLD CREAM.

Glass Pots, 2 sizes, 8s. and 16s. per dozen, in boxes of one dozen and half dozen.

VASELINE CAMPHOR ICE,

Fancy Paper Boxes, 1 size, 8s. per dozen, in boxes of one dozen.

PURE VASELINE

Is also put up in similar packages to the Pomades, and for the convenience of Chemists for dispensing, &c., in 1 lb. tins, 2s. 6d., and 5 lb. tins, 2s. 3d. per lb., packages included. OF ALL WHOLESALE HOUSES.

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All the above articles have our Name on labels and packages. The word "Vaseline" is registered as our Trade Mark.

Pamphlets containing Editorials, Recommendations, Formulas, &c., post free to any address.

F. NEWBERY & SONS.

37 Newgate Street,
LONDON, E.C.

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"ACME" FEEDERS.

MUSTARD PLASTERS.

BERDOE'S PERFUMES.

BROCKEDON'S POTASS.

SIXPENNY FEEDERS.

COTTON WOOL.

SANTAL CAPSULES.

WARNER'S PILLS.

Of British and Foreign Proprietary Medicines, Druggists' and General Sundries, &c., 168 pp., 4to., sent free on application.

White Crystal Glass Bottle, Tube and Bottle Brushes, &c., in neat box, at per dozen, 7s. The same, with pure Native Rubber Fittings, &c., &c., at 10s. 6d. per dozen, subject to usual discount.

Equal, if not superior, to any in the market, and affording a *reasonable profit* to dealers. 6d. Damp-proof Cases at 3s. per dozen; 1s. 3d. Tins, at 10s. 6d. per dozen.

Triple strength for reducing. Bottles contain 5 ozs., 10 ozs., or 20 ozs. Upwards of 50 varieties, from 9s. 6d. per 20 ozs. Bottles not charged for. *Details in CHEMIST AND DRUGGIST for August. See also Trade Notices, page 201.*

Brockedon's Compressed Pure Bi-carbonates of Soda or Potass are the well-known remedies for Indigestion, Flatulency, &c. Handsome Show Boxes, containing 1 dozen 1s. or $\frac{1}{2}$ dozen 2s. 6d. size, are now ready. No extra charge if packed in bottles for exportation.

Several varieties and prices. Green Glass and Boxwood Mounted Corks, 3s. 6d. per dozen; ditto, with Terra Cotta Caps, at 3s. 9d. per dozen; White Glass Bottle and White Porcelain Caps, at 4s. per dozen; "Duplex" Bent Feeders, at 3s. 9d. and 4s. per dozen.

Attention is called to the new and thoroughly *Absorbent Cotton Wool*, which possesses special advantages for dentists' use and as a wound dressing. It is perfectly pure and white, and should supersede the use of the sponge in dressings. Price per lb., 2s. 6d.

Churchill's Pure Santal Oil Capsules are offered to the Trade as a most satisfactory and reliable Medicine. In boxes containing 24 Capsules, at per dozen, 27s.

F. Newbery & Sons are the sole appointed agents for the Sugar-coated Pills of W. R. Warner & Co. These Pills were awarded World's Fair Prizes at Philadelphia, 1876, Vienna 1873, Chili 1875, and Sydney 1877, and are gaining the appreciation of the Profession and the Trade generally in the country. See Advt., page 201.

PARIS EXPOSITION, 1878.

AWARDED BRONZE MEDAL.

FIVE GRAND WORLD'S FAIR PRIZES.

*Orders received from all parts of the
World.*

VIENNA, 1873.

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**WM. R. WARNER & CO.'S****PERMANENT] Sugar-Coated Pills, [AND SOLUBLE.**

OF THE BRITISH PHARMACOPEIA AND RECIPES OF EMINENT PHYSICIANS.

CENTENNIAL WORLD'S FAIR AWARD.

"The Sugar-Coated Pills of Wm. R. Warner & Co. are SOLUBLE, RELIABLE, and UNSURPASSED in the perfection of SUGAR-COATING, thorough composition, and accurate subdivision.

"The pills of PHOSPHORUS are worthy of special notice. The element is thoroughly diffused and subdivided, yet perfectly protected from oxidation."

[SEAL] *Attest, J. L. CAMPBELL.*A. T. GOSHORN, *Director General.*J. R. HAWLEY, *President.*

Price per 100, per 500.				Price per 100, per 500.				Price per 100, per 500.			
No.	s. d.	s. d.	No.	s. d.	s. d.	No.	s. d.	s. d.	s. d.	s. d.	s. d.
25. Pil. Aloes et Assaf. B.P.	1 0	4 3	46. Pil. Acid. Arsenious	1 0	4 3	67. Pil. Rhei. Comp.	2 0	9 3	2 0	9 3	2 0
26. " Aloes Barbado. B.P.	1 0	4 3	47. " Ague	2 3	10 6	68. " Strychnia, $\frac{1}{10}$ gr.	1 0	4 3	1 0	4 3	1 0
27. " Aloes et Ferri. B.P.	1 0	4 3	48. " Aloes et Mastich	1 6	6 9	69. " Iodoform et Ferri	2 0	9 3	2 0	9 3	2 0
28. " Aloes et Myrrh. B.P.	1 0	4 3	49. " Antibilious	1 6	6 9	70. " Analeptic	2 0	9 3	2 0	9 3	2 0
29. " Aloes Socot. B.P.	1 0	4 3	50. " Antidyspeptic	2 3	10 6	71. " Anodyne	2 3	10 6	2 3	10 6	2 3
30. " Assafet. Comp. B.P.	1 3	5 3	51. " Aperient	2 3	10 6	72. " Antichlorotic	2 3	10 6	2 3	10 6	2 3
31. " Gambogiae Comp. B.P.	1 0	4 3	52. " Camphore et Hyoscynami	1 6	6 9	73. " Antichloromania	2 3	10 6	2 3	10 6	2 3
32. " Cinchonidiae Sulph. 1 gr.	1 8	7 11	53. " Cathartic Co. (Exotic)	1 6	6 9	74. " Antispasmodic	2 3	10 6	2 3	10 6	2 3
33. " " " 2 " 3 0	14 3	54. " " (Improved)	1 6	6 9	75. " Antiperiodic	2 3	10 6	2 3	10 6	2 3	10 6
34. " " " 3 " 4 3	20 6	55. " " (Vegetable)	1 6	6 9	76. " Antisplenetic	2 0	9 3	2 0	9 3	2 0	9 3
35. " Colocynth. Comp. B.P.	2 0	9 3	56. " Emmenagogue	3 0	14 3	77. " Astringens	2 0	9 3	2 0	9 3	2 0
36. " Colocynth. et Hyoscynami. B.P.	2 0	9 3	57. " Ext. Belladonnae 1 gr.	1 0	4 3	78. " Cathartic (Cholagogue)	2 0	9 3	2 0	9 3	2 0
37. " Conii Comp. B.P.	1 3	5 6	58. " Ext. Nuc. Vomice $\frac{1}{2}$ gr.	1 0	4 3	79. " Ecceprotic	2 0	9 3	2 0	9 3	2 0
38. " Ferri Carb. B.P.	1 3	5 6	59. " Ferri Iodid.	2 0	9 3	80. " Laxativa	2 0	9 3	2 0	9 3	2 0
39. " Hydrargyri, 3 gr. B.P.	1 3	5 6	60. " Morphiae Sulph. $\frac{1}{2}$ gr.	2 0	9 3	81. " Sedativa	2 3	10 6	2 3	10 6	2 3
40. " Hydrarg. Subchlor. Co. B.P.	1 3	5 6	61. " Nematric	8 6	—	82. " Tonic	2 0	9 3	2 0	9 3	2 0
41. " Ipecac. cum Scilla. B.P.	1 3	5 6	62. " Opii, Camph. et Tannu.	2 3	10 6	83. " Hydrarg. 5 grs.	1 6	—	1 6	—	1 6
42. " Plumbi cum Opii. B.P.	2 0	9 3	63. " Podophyllin, $\frac{1}{2}$ gr.	1 0	4 3	84. " Iodide of Mercurv, $\frac{1}{2}$ gr.	1 0	4 3	1 0	4 3	1 0
43. " Quinine, 1 gr.†	7 0	34 3	64. " Podophyllin Co.	2 0	9 3	85. " Cathartic Co.	1 6	6 9	1 6	6 9	1 6
44. " Saponis Comp. B.P.	2 0	9 3	65. " Quin. et Ferri et Strychnia	5 0	24 3	86. " Diuretic	1 6	—	1 6	—	1 6
45. " Scilla Comp. B.P.	1 3	5 6	66. " Quinine Sulph. 2 gr.†	13 8	67 7	87. " Ferri Pyrophos. 1 gr.	1 3	5 6	1 3	5 6	1 3

† Price fluctuates with rates for Quinine.

SPECIAL RECIPES FOR 3,000 OR MORE MADE TO ORDER.

WARNER & CO.'S SUGAR-COATED PHOSPHORUS PILLS.

A Perfect and Reliable form for the Administration of Free Phosphorus in combination with

Nux Vomica, Iron, Quinine, Zinc, Strychnia, Morphia, Indian Hemp, Cantharides, Digitalis, Aloes, &c.

*Twenty-four combinations in Stock. Detailed Price List, giving the formulæ, may be had on application.***Price per 100 from 3s. to 8s.**

For EFFICACY, PERFECTION, and FREEDOM from harm, Warner & Co.'s Pills of Phosphorus are unrivalled. The process originate and perfected by W. R. WARNER & Co., for the administration of Phosphorus in pill form, diffuses the Phosphorus, in its elementary state, thoroughly through the soft and non resinous mass in a state of solution, a result by no other process attainable. The value of Phosphorus as a remedial agent is impaired if the element is not exhibited in its free state, and protected from oxidation by a perfect and impervious coating of pure white sugar. You are cautioned to avoid cheaper and inferior brands.

F. NEWBERRY & SONS, 37 Newgate Street, London, E.C.

The following hold Stock:—Grattan & Co., Belfast; Proctor & Son, Newcastle-on-Tyne; Raimes & Co., Edinburgh; Symes & Co., Liverpool; T. R. Lester, Cork; McMaster & Co., Dublin; McCaul, Londonderry; Botwright & Kemp, Islington; McIlwaine & Marshall, Newry, &c., &c., &c.

SILVER MEDAL.

SOLE MANUFACTURERS AND PROPRIETORS OF

PARIS, 1878.

**JUJUBES,**

BY HAWKER'S PATENT PROCESS.

A. & H.

TRADE



MARK.

A.D. 1715.



The merits of these articles have now become widely known. Prepared by this process Jujubes are rendered less adhesive, much brighter in appearance, and may be kept for long periods without change.

BLACK CURRANT	LICHEN	MIXED FRUITS	PECTORALE	RASPBERRY	TAMARIND
GLYCERINE	LIQUORICE	MAGNUM BONUM	PINE	ROSE	VOICE

2/- per lb., or in tin boxes, 6d. size, 4/-; 1/- size, 8/-.

All the above Tins are neatly wrapped ready for sale. The One-Pound Tins are returnable at 6/- per dozen.

GLYCERINE, VOICE, TAMARIND (and all other) PASTILLES, 2/2 per lb.

Or in 6d., 1s., and 1-lb. tin boxes, 4/4 and 8/6 per dozen.

GUIMAUVE.....2/6 per lb., in 1/- and 1 lb. tin boxes, 8/- per dozen.

DELECTABLE.....2/4 per lb., or in 6d. and 1/- tin boxes, 4/4 and 8/6 per dozen.

CRYSTALLIZED FRUIT PASTILLES.....2/- per lb. | CRYSTALLIZED JUJUBES (Mixed).....1/8 per lb.

HANDSOME NEW UPRIGHT SHOW CASES.

The frames are fitted with Glass Shelves, Silvered-glass Backs, and are lettered in Gold; to display three kinds of Jujubes or Pastilles. Price 17/6 each. Size, 21 in. high, 10 in. broad, and 8 in. deep.

ALLEN & HANBURY'S,

WHOLESALE DRUGGISTS, MANUFACTURERS OF PHARMACEUTICAL PREPARATIONS, &c.,
PLOUGH COURT, 37 LOMBARD STREET, LONDON, E.C.

General List of Drugs, Chemicals, &c., posted free on application.

May be had on application enclosing Business Card.

S. MAW, SON & THOMPSON'S

QUARTERLY PRICE CURRENT

AND

BOOK OF ILLUSTRATIONS

OF

SURGEONS' INSTRUMENTS & APPLIANCES,

AND

DRUGGISTS' SUNDRIES OF ALL KINDS.

Forwarded post free to all parts of the World.

S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, LONDON.

JUDSON'S ANILINE DYES.

"CHEAP AND GOOD."

	OZ.	LB.	
1. MAGENTA	1/0	9/0	The very best.
2. VIOLET, B.B.—No. 1	1/6	16/0	Full colour.
3. DITTO, R.—Very Cheap	1/0	8/0	Good and serviceable.
4. BLUE, TURQUOISE	1/6	16/0	At for Silk and Feathers.
5. DITTO, NIGHT	2/0	24/0	The popular shade.
6. DITTO, NAVY	1/6	16/0	Winter colour for Wool or Silk.
7. GREEN, EMERALD	1/6	16/0	For Silk and Feathers.
8. DITTO, GAS	1/6	16/0	Called "Night Green."
9. CRIMSON	1/0	8/0	Rich and cheap, for Wool.
10. MAROON	1/0	8/0	Useful colour.
11. CARDINAL	1/6	16/0	Bright Red.
12. BROWN, BISMARCK	1/0	6/0	Leather colour.
13. DITTO, OLIVE	1/0	6/0	Snuff colour.
14. ORANGE	1/6	16/0	Golden Yellow.
15. PHOSPHINE	3/0	42/0	For mixing with Magenta.
16. SCARLET P.	3/0	42/0	For Feathers.
17. CERISE	2/0	24/0	Lovely shade, for Wool or Silk.
18. BLACK or GREY	1/6	16/0	Called "Aniline Black."
19. ECRU or IVORY	2/0	24/0	Fashionable shade.
20. PICRIC	0/6	2/6	Deep Primrose.

Less than ¼ lb. is charged at per doz.

JUDSON'S DOUBLE GUM.

SWEET, STRONG, ATTRACTIVE.

"A Gum that will Stick."

RETAIL.

1s.	{	The COMMERCIAL GUM , with Boxwood Cap and Superior Brushes	8s.	per dozen, in a box.
1s.	{	The Pint or REFILL GUM , in Strong Bottles	8s.	per dozen, in a box.
6d.	{	The COMMERCIAL GUM , with Boxwood Cap and Superior Brushes, well secured for Export	4s.	per dozen, in a box.
6d.	{	The Half-pint or ECONOMIC GUM	4s.	per dozen, in a box.
4d.	{	1 dozen in box, with Cap and Brush	2s. 4d.	per dozen, in a box.
1d.	{	The Best PENNY GUM out, clean, sweet, and adhesive, square bottles, pack with economy	8s.	per gross, ½-gross boxes.
6d.	{	MAHOGANY POWDER—WOOD STAIN —Add a quart of boiling water to the Powder and the stain is made. By adding only a pint of boiling water a rich brown stain is made. This stain penetrates the wood and will not rub off. Stain a two-foot margin to your bed-room floors and thus save carpet and encourage cleanliness. In Church Decoration this stain should save many a yard of cloth. This article will command a large sale when once introduced.	4s.	per dozen, packets.

DANIEL JUDSON & SON, 77 SOUTHWARK STREET, LONDON;
AND ALL WHOLESALE DEALERS.

IMPORTANT NOTICE TO THE TRADE, 1879.

PRIZE MEDAL,



LONDON, 1862.

PRIZE MEDAL,



PHILADELPHIA, 1876



LOW'S FRENCH EXTRACTS, &c., viz.:

per lb.				per lb.				per lb.			
Ext. Cassie	...	...	9/6	Ext. Rézéda	...	...	9/6	Ext. Tubereuse	...	...	9/6
„ Jasmin	...	...	9/6	„ Rondeletia	...	...	8/-	„ Violet	...	...	11/6
„ Jonquil	...	...	9/6	„ Rose	...	...	9/6	„ Verbena	...	...	8/-
„ Lily of the Valley	...	...	9/6	„ Rose Geranium	...	...	9/6	„ White Rose	...	...	10/6
„ Magnolia...	...	...	9/6	„ Spring Flowers	...	...	9/6	„ White Lilac	...	...	9/6
„ Orange Flower	...	...	9/6	„ Stephanotis	...	...	9/6	„ Wood Violet	...	...	11/6
„ Patchouli	...	...	9/6	„ Sweet Briar	...	...	9/6	„ Wild Rose	...	...	9/6
„ Queen of the Alps	...	...	9/6	„ Tea Rose...	...	...	9/6	„ Ylang Ylang	...	...	9/6

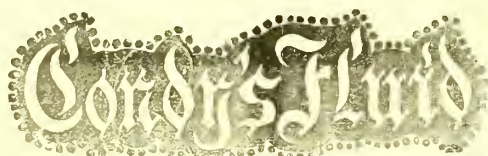
ARE NOW REDUCED IN PRICE, AS ABOVE.

For NEARLY 40 YEARS these EXTRACTS have borne the HIGHEST REPUTATION both for PURITY AND STRENGTH, and a trial is requested by all who have not used them. They are guaranteed to be AS FINE AS CAN BE PRODUCED AT ANY PRICE, and are only REDUCED IN PRICE consequent upon the increasing demand, and in competition with the many that have recently been put before the Trade of more or less doubtful merit. The Proprietors are confident, from their long experience, that they will compare favourably with any in the market, and that they will meet with the increased patronage they deserve.

R. LOW, SON & HAYDON,

Perfumers, Toilet Soap Makers, and Brush Manufacturers,

330 STRAND (OPPOSITE SOMERSET HOUSE) LONDON.



SODA v. POTASH.

A TRADE DIALOGUE.

SCENE: THE SHOP OF A CHEMIST.

SPEAKERS { The Chemist.
A Partner in the late firm of Bollmann Cond'y & Co.

Chemist.—I see it is stated with much emphasis, in an advertisement, by one of the Partners in the late firm of Bollmann Cond'y & Co., that "Cond'y's Fluid is not, and never was, composed of Permanganate of Potash." The article being patented the specification ought to determine that point; and you, having been also a Partner in the late firm, must of course be acquainted with its terms. How was the invention described?

Partner.—You are quite right. Not only was there a Patent, but the word "Patent" has always been put in the title on the labels, so that the correct name of the article is not Cond'y's Fluid, but "Cond'y's Patent Fluid." The Patent was for the use of Manganate and Permanganate of Potash or Soda as purifying and disinfecting agents.

Chemist.—The Patent, then, was for both the Potash and the Soda salts. It has been asserted that when the invention was put in operation, and Cond'y's Fluid brought out, Permanganate of Soda alone was used.

Partner.—At that time, the Permanganates not being commercial products, it was necessary to begin by preparing the salt to be employed. Soda being much cheaper than Potash, and it being a matter of entire indifference, so far as the chemical efficacy was concerned, which was chosen, the preference was naturally given to Soda.

Chemist.—Potash, it seems to me, however, would produce a better article, because the Potash salt being crystallizable (whereas the Soda salt is not) yields a product of greater purity, permitting of uniformity in the strength of the solution. But cheapness, as you say, must have been the chief consideration, especially at the time when the Permanganates were looked upon somewhat as chemical curiosities.

Partner.—True. It would no doubt have been better to use the Potash salt, but its greater cost was considered an obstacle.

Anyhow, Soda was the base chosen. Crude Manganate of Soda was first made, and to it, in solution, Sulphuric Acid was added in quantity sufficient to convert the Manganate into Permanganate; Hydrated Oxide of Manganese was thrown down, and the supernatant liquor, consisting of solution of Permanganate of Soda and Glauber's Salt, was then bottled and sold as Cond'y's Fluid.

Chemist.—Quite so; that is what I suspected on having observed that many of the Bollmann bottles were partially filled with crystals of Glauber's Salt. If I am not mistaken, however, some compensating advantages have lately been claimed for the presence of this impurity; it has been said to impart antiseptic properties to the Fluid, but I should think that the effects of a drachm or two of Glauber's Salt in a pailful of dilute Permanganate solution must be quite infinitesimal.

Partner.—At all events, the superiority of the Potash salt was so obvious, that Chemists and Pharmacists, by common accord, seem to have taken it for granted that it had been preferred to the other substances mentioned in the patent; for you will find it stated in most works on Chemistry, Pharmacy, and Materia Medica that Cond'y's Fluid is a solution of Permanganate of Potash.

Chemist.—Yes; and, for my part, I cannot understand how any maker of Cond'y's Fluid can expect to enhance the reputation of his article by the avowal that it is prepared from a substance having the disadvantages I have pointed out.

Partner.—But it is asserted that Soda is a rare and expensive material compared with Potash, and no doubt that was once the case; but it was a very long time ago, and would take us back to the age of the "mineral chameleon."

Chemist.—For my part, I am quite satisfied with the present age, and mean to stick to the improved Potash preparation of the Cond'y's Fluid Company.

THE CONDY'S FLUID CASE.—Cond'y v. Mitchell. FINAL DEFEAT of MR. H. BOLLMANN CONDY. FAILURE AND EXPOSURE OF THE "TRAP TO CATCH CHEMISTS."

(*Price of Report in "The Chemist and Druggist," December 15th, 1877.*)

COURT OF APPEAL, LINCOLN'S INN, Nov. 27, 1877.

LORD JUSTICE JAMES (without needing to hear defendant's counsel) said—That such a suit should have been instituted at all was very remarkable; but that, after the learned Vice-Chancellor's judgment, this appeal should have been brought on was particularly strange. Dr. Mitchell had obtained his right by payment of a substantial money consideration, and CONDY'S FLUID AND CONDY'S OZONISED WATER WERE AS MUCH HIS PROPERTY AS THE PLAINTIFF'S. Having that right, Dr. Mitchell was entitled to set up the Cond'y's Fluid Company.

LORD JUSTICE BAGGALLAY was of the same opinion. The style of the partnership had been "Bollmann Cond'y & Co.," and the plaintiff set up in his own name of "H. Bollmann Cond'y." It was not necessary to consider whether he might have been restrained from so doing; but he came into court with a very bad grace. To get evidence HE HAD RESORTED TO WHAT WAS, IN FACT, A TRAP TO CATCH CHEMISTS.

LORD JUSTICE THESIGER was also of that opinion; and especially as to the character of the plaintiff's evidence. A good deal of it seemed to him not admissible at all.

LORD JUSTICE JAMES: APPEAL DISMISSED WITH COSTS.

NOTICE.—Chemists ordering should specify **THE CONDY'S FLUID COMPANY'S** articles at **REDUCED TRADE PRICES**, which are listed by the principal Wholesale Houses. They are made in strict accordance with the Patent, are uniformly up to strength, free from sediment, securely corked, and always give satisfaction alike to consumer and to dealer. They are guaranteed by the original labels of the late Firm, with Prize Medals awarded at International Exhibitions, the unwarranted use of which is a misdemeanor, and the right to the use of which is confirmed to the Company by Decree.

THE CONDY'S FLUID COMPANY, 7 FALCON STREET, LONDON, E.C.

N.B.—Beware of mean and fraudulent Imitations of our Firm and Prize Medal Labels.

OZOKERINE

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A new preparation, PERFECT as a BASIS for OINTMENTS, of admirable consistency, bland, emollient, antiseptic, and healing.

CANNOT BECOME RANCID.

"Moderate in price, and deserving a careful trial."—BRITISH MEDICAL JOURNAL.

"A valuable and useful substance, and will in all probability be very largely used."—MEDICAL TIMES AND GAZETTE.

"Will take a high position among our other pharmaceutical preparations."—MEDICAL PRESS AND CIRCULAR.

"Likely to prove useful as a dressing for wounds and excoriations."—PRACTITIONER.

OZOKERINE is a clear, pale yellow, very slightly fluorescent body, composed of hydrocarbons akin to Paraffine in their chemical characters. It is produced from Ozokerit, or Earth Wax, by the separation of lighter and denser hydrocarbons, and subsequent purification by processes which remove smell and taste, and yield it in the pleasant form which has already gained for it a preference before other similar bodies.

OZOKERINE has been used with remarkable success as a simple dressing for wounds, its mild and healing properties rendering it peculiarly grateful to the patient.

OZOKERINE is unsurpassed as an *unguent basis*; *unchangeable* in itself, except by the action of the *most powerful chemical agents*, it preserves other bodies with which it may be incorporated from all tendencies to decomposition. The *superiority* of *Ozokerine* to *lard* in this respect *cannot be over-estimated*.

OZOKERINE, in addition to the above advantages, possesses that of being *moderate in price*, which marks it out as a preparation destined to supersede all other articles hitherto used for similar purposes.

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WHOLESALE AND EXPORT DRUGGISTS,

300 HIGH HOLBORN, LONDON.

CLARKE'S WORLD-FAMED "BLOOD MIXTURE."

COPY OF OFFICIAL CERTIFICATE,

ACCORDING TO THE LAST TRADES MARKS' ACT.

TRADE MARKS' REGISTRY OFFICE: LONDON, 4th May, 1878.

FRANCIS JONATHAN CLARKE, Esq.

SIR,—I have to inform you that, pursuant to Rule 21 under the Trades Marks' Registration Act, 1875, the Trade Marks applied for by you in application No. {3,270 and 3,272-3-4-5}, and duly advertised in No. 20 of the Trade Marks' Journal, have been registered in your name in class 3.—I am, sir, your obedient servant, **H. HEADER LACK, Registrar.**

Mem.—3,275 is the number of Mr. F. J. Clarke's Trade Mark, "BLOOD MIXTURE."

IN CHANCERY.

LORD CHANCELLOR.

VICE CHANCELLOR MALINS.

1873. C. No. 109.

Between FRANCIS J. CLARKE, Plaintiff,

AND

GEORGE CLARKE, Defendant.

CAUTION.

WHEREAS, the Vice-Chancellor, Sir Richard Malins, on the 21st day of July, 1873, upon the application of Francis J. Clarke, of High Street, in the City of Lincoln, Chemist, the plaintiff in the above suit, awarded a perpetual Injunction, restraining the defendant, George Clarke, of Manchester, his servants and agents, from using the words "Blood Purifying Mixture," or any other imitation or colourable imitation of the *Plaintiff's Trade Mark*, "**BLOOD MIXTURE**," in or upon any bottles offered for sale by or for the defendant, or on any labels, handbills, or advertisements printed, used, or issued by or for the defendant, and from in any other way representing any medicine, compounded by or for him, to be "Blood Mixture," and from doing any act or thing to induce the belief that medicine compounded by or for the defendant, is "Blood Mixture," or a medicine compounded by the plaintiff.

And it was Ordered, that the defendant, at the request of the plaintiff, and in the presence of some person to be appointed by him for that purpose, destroy all wrappers, handbills, bottles, advertisements, and circulars in the defendant's possession, or under his control, containing the plaintiff's said trade mark, or any colourable imitation thereof.

ALL PERSONS ARE THEREFORE CAUTIONED against purchasing, selling, exposing for sale, or otherwise dealing in any medicine purporting to be "Blood Mixture," not compounded by the plaintiff, Francis J. Clarke, in bottles or wrappers, or with other accompaniments bearing facsimiles or fraudulent or colourable imitations of those invented and used by the plaintiff, the said Francis J. Clarke. Retail dealers, as well as manufacturers, are equally liable.

Dated this 28th day of July, 1873.

H. K. HEBB, Plaintiff's Solicitor, LINCOLN.

CAUTION.—PUBLIC APOLOGY.

CLARKE'S WORLD-FAMED BLOOD MIXTURE.

I, CHARLES MONTAGUE CLARKE, do hereby acknowledge that I, under the SPURIOUS title of Doctor of Medicine, have illegally infringed and pirated your Trade Mark, "**BLOOD MIXTURE**," and copied your advertisements, labels, handbills, and "Caution," with intent to deceive the public.

And I, GEORGE HERBERT CLARKE, of 130 SHOREDITCH, LONDON, do hereby acknowledge that I, under the title of Pharmaceutical Chemist, have prepared and sold for the said Charles Montague Clarke a certain compound called Blood Renovator.

Now we, the said Charles Montague Clarke and George Herbert Clarke, do hereby, in consideration of your consenting to offer no evidence against the said George Herbert Clarke on a **TRUE BILL FOUND AGAINST HIM**, under the Merchandise Marks Act, by the Grand Jury of the Middlesex Sessions, on the 6th day of October instant, undertake and agree to discontinue such practices, and to hand over to your Solicitor forthwith all wrappers, handbills, advertisements, circulars, and bottles containing the stuff, in our power or control, relating to the said *spurious compound* called "Blood Renovator," and we humbly apologise for having resorted to such practices,

**CHARLES MONTAGUE CLARKE.
GEORGE HERBERT CLARKE.**

SIGNED by the said Charles Montague Clarke and George Herbert Clarke, on the 13th of October, 1874, in the presence of **HENRY BULL**, Clerk to Mr. J. SEYMOUR SALAMAN, 12 King Street, Cheapside, Solicitor to the Trade Mark Protection Society. To Mr. F. J. CLARKE, Lincoln, Proprietor of Clarke's World-Famed Blood Mixture.

CAUTION.—Mr. CLARKE will take immediate proceedings against all persons pirating his Trade Mark—"BLOOD MIXTURE" (fully protected under the Trade Marks' Registration Act of 1875), Labels, Wrappers, Bills, or Advertisements, or in any way infringing his rights.

S. MAW, SON & THOMPSON'S
NEW
SHOW ROOMS
ARE NOW OPEN,
CONTAINING COMPLETE SAMPLES OF ALL KINDS OF
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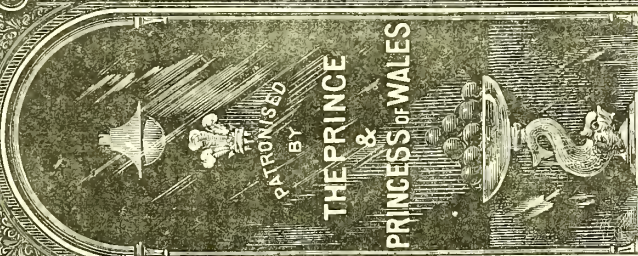
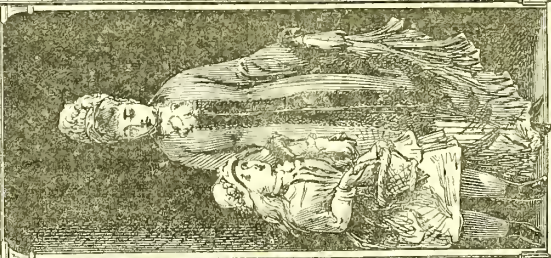
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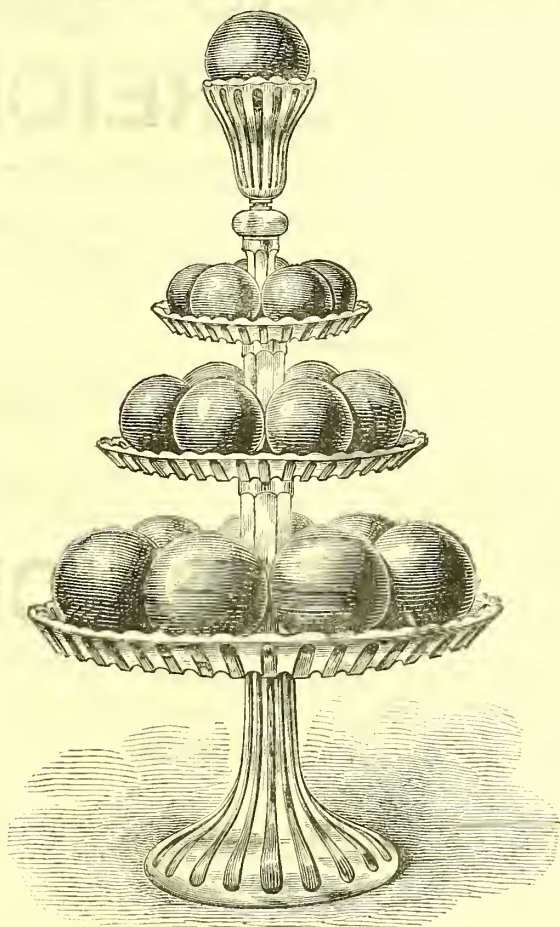
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PEARS' Transparent SOAP.

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THE PRIZE MEDAL.

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GLASS STANDS.

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22 inches high, and 10 inches greatest breadth.

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Recommended by **DR. WM. ODLING, F.R.S.**, Professor of Chemistry, Oxford University.

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LIEBREICH'S SYRUP OF CHLORAL

Prepared under the direction and guaranteed by the signature of Prof. OSCAR LIEBREICH, of Berlin.

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"Guaranteed by Liebreich as the purest form of the drug."—Medical Press and Circular.

"It is probable that, in future dispensing and prescribing, medical men will ensure themselves and their patients against disappointment and accidents by prescribing the 'Syrupus Chloralis (Liebreich)'. The flavour is well covered."—*Brit. Med. Jour.*, Sept. 2nd, 1877.

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STRENGTH.—Ten grains of Chloral in each Fluid Drachm or Measured Teaspoonful.

"The flavour of the Chloral is so skilfully disguised, that little besides the sugar can be tasted. We think it is likely to become very popular."—*Chemist and Druggist*, August, 1877.

LIEBREICH.

"Pharmaceutically it is a type of what a syrup should be, and we have rarely seen so elegant a fluid; the taste is pleasantly, and almost perfectly, disguised."—*Monthly Magazine of Chemistry and Pharmacy*, October, 1877.

Bottles 3/6 and 2/- each; 28/- and 16/- per dozen. 1-lb. Bottles, for Dispensing, 3/4 each.

Every Bottle bears the signature of Dr. O. LIEBREICH, and the names of the SOLE MANUFACTURERS, CORBYN, STACEY AND COMPANY, 300 High Holborn, London.

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"We have ascertained clinically that a teaspoonful of this very light and palatable preparation, taken, according to direction, after food, has a considerable power of aiding imperfect and diseased digestion."—*British Medical Journal*.

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Every bottle bears the name of the Sole Agents—CORBYN, STACEY & COMPANY.

"Since the appearance of an article by Dr. LIEBREICH, in the *Practitioner*, on the action of Pepsin, attention has again been drawn to that preparation. All that can be said on the subject of the various kinds of Pepsin in circulation is what has been frequently repeated, namely, that in the beginning dry preparations act quite well, but that they do not keep for any length of time. The researches of Panum and Freyer have shown that of the various solutions the best is the Pepsin-Essenz of OSCAR LIEBREICH."—*British Medical Journal*, July 21, 1877.

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"Dr. LIEBREICH'S Pepsin-Essenz is agreeable to look at and pleasant to the taste, and in some cases in which we have employed it the result has been highly satisfactory. We think it well worthy the attention of the profession."—*Medical Times and Gazette*.

"It possesses to a considerable degree the power of coagulating milk, and it may therefore be advantageous in the dyspepsia of infants."—*Practitioner*.

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A Natural Calamine, prepared from ore selected and imported by CORBYN & CO.

Of this Calamine Dr. TILBURY FOX says that "it is excellent in every respect."

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The *Lancet* says it is "an excellent preparation of Calamine, very fine in powder, soft and free from grit."

EXTRACT OF MALT.

CORBYN & Co. prepare this extract in VACUO, at a temperature so low that the full proportion of *Diastase* is retained and the characteristic flavour is unimpaired. It is nourishing, and rich in both fat and flesh formers, and may be had associated with such remedies as Iron, Quinine, the Hypophosphites, Cod Liver Oil, &c. **Bottles 2s. each.**

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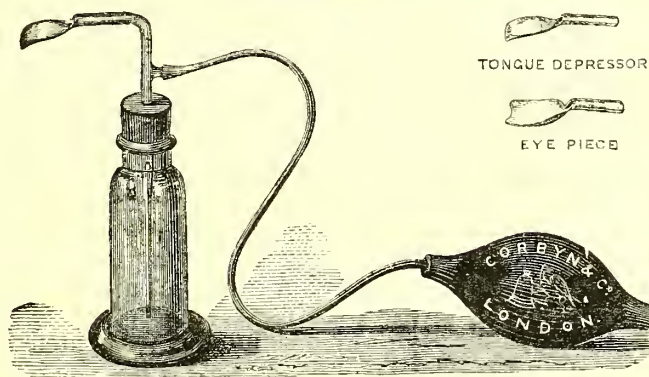
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"— A perfect form of 'Throat-Spray,' introduced by Messrs. CORBYN, STACEY & Co. This particular form is constructed upon the principles observed in all such pieces of apparatus, but is particularly good in kind."—*Pharmaceutical Journal*.

Price complete, in Velvet-lined Box, 8s.; Retail, 12s.

CHAULMOOGRA OIL

(OLEUM GYNOCARDIÆ), expressed from the seeds of GYNOCARDIA ODORATA, R.Br.

This Oil is an official remedy in India for Leprosy, Scrofula, Skin Diseases, and Rheumatism—see *Pharmacopœia of India*, p. 26, where it is also stated that the oil procured from the bazaar is usually impure.

C., S. & Co. have completed arrangements for uninterrupted supplies of the Oil in a condition of absolute purity, and are now in a position to furnish it in *Bottles*, in *Perles*, and as an *Ointment*. The dose is from three to fifteen minims.

For further information, see a Pamphlet entitled "Papers on the Plant *Gynocardia odorata*, &c.," by R. C. LEPAGE, Esq., late of Calcutta, post free, One Shilling. On pp. 11 to 17 will be found particulars of remarkable cases of Leprosy, Scrofula, and Secondary Syphilis successfully treated by Dr. MOUAT.

The Pure Oil in 4/6 Bottles, 38/- per doz.; ½-lb. Bottle (10/6), 7/-; 1-lb. Bottle (20/-), 13/4 each.

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Ointment, 2-oz. Pot (1/9), 14/-; 4-oz. Pot (3/-), 24/-; 1-lb. Pot (10/6), 78/- per doz.

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MALTINE

(Extract of Malted Barley, Wheat, and Oats).

This Preparation contains from Five to Ten times the beneficial and nutritive elements found in any Alcoholic Extract of Malt.

MALTINE is a highly concentrated extract of malted BARLEY, malted WHEAT, and malted OATS, containing, undiminished and unimpaired, all the nutritious principles that can be extracted from these cereals. By the most carefully conducted scientific process we are enabled to offer to the Medical Profession a perfect article, possessing FIVE to TEN TIMES the beneficial and nutritive merit of any alcoholic or fermented Extract of Malt.

In support of our claims we invite the attention of the Profession to the following points, viz. :—

First: In the manufacture of **MALTINE** the evaporation necessary to reduce it to its greatest density is conducted *in vacuo* at a temperature ranging from 100° to 120° Fahr.; while many manufacturers of Extract of Malt resort to "open pan" or low pressure steam-boiling. By neither of the latter processes can the extract be so produced as to preserve unimpaired the Diastase, Phosphates, and Albuminoids on which its remedial value so greatly depends; the products also are either of a dark colour or of low specific gravity, and possess little virtue aside from the saccharine matter which they contain.

As a sure test for the Albuminoids, a small quantity should be put in a test tube or small vial, largely diluted with water, and heated to the boiling point, when the Albumen, if present, will coagulate, and appear in little flocculent particles throughout the liquid. If the extract remains clear, it is proof that it has already been coagulated by excessive heat, and removed by filtration during the process of manufacturing. Any heat which will coagulate Albumen will, *pro tanto*, impair the Diastase.

Second: **MALTINE** being a non-alcoholic or unfermented malt extract, and prepared at a low temperature, it contains far more of the invaluable starch-converting Diastase than any alcoholic malt extract can possibly contain, while its concentrated condition prevents the Diastase from being spoilt by keeping. In **MALTINE** this innocuous but all-powerful medicinal agent, Diastase, is thus placed at the disposal of medical practitioners and the public in its best possible condition.

Third: **ZIEMSEN** says, "During the last few years Malt Extract has almost entirely taken the place of Cod-liver Oil in the treatment of phthisis and other wasting diseases at the Basle Hospital, and we have as yet found no reason for returning to the use of the latter remedy." The carbo-hydrates, or heat-producing materials, in **MALTINE** will alone, we believe, be found to be the perfect equivalent of Cod-liver Oil, to say nothing of the nourishing materials.

Fourth: **LIEBIG** says, "Wheat and Oats stand first among our list of cereals in combining all the elements in proportions necessary to support animal life. They are especially rich in muscular and fat-producing elements." Hence our reason for using malted Wheat and malted Oats, while we use malted Barley in the manufacture of **MALTINE**, because it is comparatively rich in Diastase.

We believe that any Practitioner will readily recognise the superiority of **MALTINE**, and the Manufacturers respectfully request a trial and comparison of merits with any article offered for similar uses.

EXTRACT of MALT is produced from Malted Barley ONLY. **MALTINE** is a highly concentrated Extract of Malted BARLEY, WHEAT, and OATS.

"WHEAT and OATS are especially rich in muscular and fat-producing elements."—Liebig.

MALTINE will increase both weight and flesh in most persons of thin habit.

MALTINE is particularly recommended for delicate Females and for weak and debilitated Children and Infants.

For Deficient Lactation, and for Mothers whilst Nursing, **MALTINE** is especially recommended.

MALTINE is the most important combination for use in Constipation.

MALTINE is entirely free from all products of Fermentation, such as Alcohol and Carbonic Acid Gas.

MALTINE is very palatable and pleasant, and will be readily taken by the youngest child.

[Continued on next page.]

The Nitrogenous constituents of **MALTINE** have a composition identical with that of the chief constituents of the Blood. **MALTINE** contains nearly every element requisite for the renewal of the tissues of the human body.

MALTINE AND ITS COMPOUNDS

Can undoubtedly be used with greater success than any other remedy now known in cases of General and Nervous Debility, Indigestion, Imperfect Nutrition, and Deficient Lactation; Pulmonary Affections, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membranes, and Difficult Expectoration; Cholera Infantum and Wasting Diseases of Children and Adults; Convalescence from Fevers, and whenever it is necessary to increase the vital forces and build up the system.

We Manufacture the following Preparations, the Formulas and Doses of which are printed on the Label attached to each Bottle:—

MALTINE. In 8-oz. and 16-oz. Bottles, at 2s. 9d. and 4s. 6d.

MALTINE, Ferrated. Do. 3s. 6d. and 6s. 6d.

This combination is specially indicated in Anæmia and Chlorosis, and in all cases of defective nutrition where Iron is deficient in the system.

MALTINE with Alternatives:

In this preparation **MALTINE** is combined with the most valuable Alternatives known, such as Iodides, Bromides, and Chlorides, and will fully meet the requirements of the practitioners in Syphilis, Scrofula, and all depraved conditions of the blood.

Each fluid ounce contains: *Chloride Calcium*, 10 grains; *Chloride Magnesium*, 10 grains; *Bromide Sodium*, 5 grains; *Iodide Potassium*, 1 grain; *Iodide Iron*, $\frac{1}{2}$ grain. Dose—One teaspoonful to one tablespoonful. In 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d.

MALTINE with Beef and Iron:

One of the most valuable combinations in cases of General Debility when there is deficient nutrition and a deficiency of Iron in the system.

In 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d.

MALTINE with Cod-Liver Oil.

The most perfect Emulsion, and most agreeable and effective mode of administering this nauseous but valuable Oil yet discovered. In 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d.

MALTINE with Hypophosphites:

This preparation is specially indicated in Phthisis, Rickets, and Deficient Ossification. In 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d.

MALTINE with Pepsine and Pancreatine:

One of the most effective combinations in Dyspepsia, Cholera Infantum, and all diseases resulting from imperfect nutrition. It contains three of the all-important digestive agents, Diastase being one of the constituents of the **MALTINE**. We believe there are few cases of Dyspepsia which will not readily yield to the medicinal properties of the above combination, while the system is invigorated by its nutritive qualities. In 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d.

MALTINE with Phos. Iron, Quinia, and Strychnia:

A powerful nutritive, general and nervous tonic. In 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d.

We are now in a position to supply our Preparation, called

MALTO-YERBINE,

With the fullest confidence that it is the most perfect remedy yet produced in Chronic Pulmonary Affections, Coughs, and Colds.

FORMULA OF COMPOSITION.—Each pint of the above Preparation contains—Maltine, 13 ounces; Carrageen, 2 ounces; *Yerbine, 1 ounce.

*YERBINE is the active principle of *Yerba-Santa*, a plant that grows on the Pacific Coast, and is recognised as being one of the most valuable expectorants known.

This Formula combines the nutritive emollient and demulcent properties of **MALTINE** and **CARRAGEEN**, with the remarkable expectorant properties of **YERBINE**. The results in practice, while affording the highest satisfaction to the practitioner, has an advantage in its administration that is altogether exceptional. The increase in flesh and weight produced by it is most decided. To the taste it is highly agreeable; in appearance and consistency it resembles a rich syrup. It will agree with the most delicate stomach, never producing either recoil or nausea. Aside from the more serious forms of Pulmonary Disease, we recommend **MALTO-YERBINE** in Irritation of the Mucous Membrane, Difficult Expectoration, Bronchitis, and ordinary Coughs and Cold, and it may be administered to the youngest child.

DOSE.—From a dessert to a table-spoonful three times daily, with meals, and at bed-time.

MALTO-YERBINE is put up in 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d., and in Winchester Quarts for Dispensaries and Hospitals.

The two following preparations complete our list of **MALTINE** productions:—

MALTINE WINE.

This preparation contains all the medical and nutritive constituents of the **MALTINE**, less 60 per cent. of the transformed starch or glucose, which renders the preparation lighter and more acceptable to some stomachs, and is recommended only in such cases.

DOSE.—From a dessert to a table-spoonful. Put up in 8-oz. and 16-oz. Bottles, at 3s. 6d. and 6s. 6d., and in Winchester quarts for Dispensaries and Hospitals.

MALTINE WINE with Pepsine and Pancreatine.

Each fluid ounce of **MALTINE WINE** contains 15 grains pure Pepsine and 15 grains pure Pancreatine.

We can recommend this preparation to the Medical Profession in all cases of Dyspepsia and Imperfect Nutrition, when the system needs invigorating and replenishing.

It will be found, we believe, a perfect remedy in Vomiting in Pregnancy, Cholera Infantum, and Wasting Diseases of Children, and in Constipation and Chronic Diarrhoea, resulting from mal-nutrition.

It will be found to agree with the most irritable stomach.

DOSE.—From a dessert to a tea-spoonful. In 8-oz. and 16-oz. Bottles, 3s. 6d. and 6s. 6d., and in Winchester quarts for Dispensaries and Hospitals.

SPECIAL NOTE.—In all cases the Dose stated is for Adults. For Children the Dose would be in proportion.

MALTINE preparations are all put up in amber bottles holding eight and sixteen fluid ounces; each bottle enclosed in a folding paper box.

THE MALTINE MANUFACTURING COMPANY, LIMITED,
GREAT RUSSELL ST. BUILDINGS (Corner of Gt. Russell and Charlotte Streets), **LONDON.**

DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS.

(Guaranteed to stand the Tests of the British Pharmacopœia.)

WRIGHT, LAYMAN & UMNEY,

50 Southwark Street, London,

EXPORT DRUGGISTS, MANUFACTURING PHARMACEUTICAL CHEMISTS,
DRUG GRINDERS, IMPORTERS & DISTILLERS OF ESSENTIAL OILS.

W., L. & U., whose Laboratories are fitted with the most modern hydraulic distillatory and evaporating appliances, are prepared to execute Indents for every description of

DRUGS AND CHEMICALS

Of the Finest Quality,

AND

PHARMACEUTICAL PREPARATIONS

Of Guaranteed Excellence.

THEY ARE MANUFACTURERS OF

UMNEY'S FLUID EXTRACT OF CINCHONA

The most Uniform, Elegant, and Powerful Preparation of Bark ever introduced to the Profession.

(See Opinions of the British and Dutch Government Quinologists, the leading Scientific Chemists and Pharmacists of Great Britain and the United States, and the leading Journals of Pharmacy and Medicine.)

SPECIAL PREPARATIONS.

Granular Effervescent Citrate Magnesia.
Granular Effervescent Preparations of all kinds.
Citrate of Iron and Ammonia.
Citrate of Iron and Quinia.
Citrate of Iron and Cinchonine.
Citrate of Iron and Cinchonidine.

Fluid Extracts.
Solid Extracts.
Blue Pill.
Pepsine, British Pharmacopœia.
Pepsine Porci.
Ferruginous Syrups.

PHOTOGRAPHIC CHEMICALS.
MEDICINAL CAPSULES.

DRUGGISTS' SUNDRIES.
COD LIVER AND CASTOR OILS.

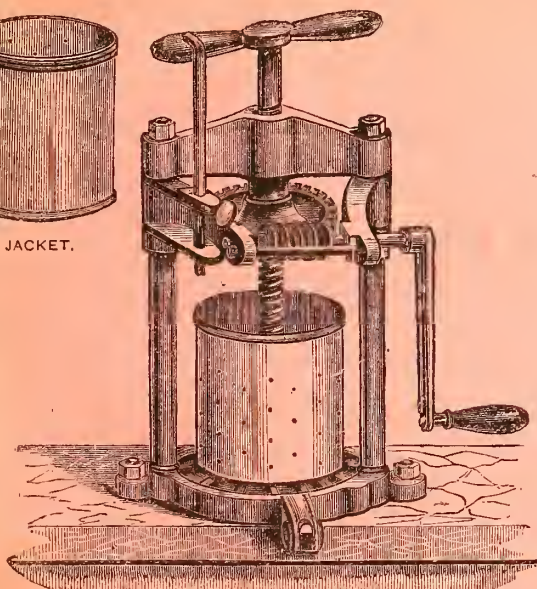
Prices Current of Drugs, Chemicals, Medicated Spirits, Chloroform, Ether, and Tinctures in bond sent upon application.

SPECIAL TERMS TO LARGE BUYERS.

TERMS	{	EXPORT INDENTS	{	Draft upon Bankers or Merchants in Great Britain.
		HOME " "		Cash to accompany order; Account (3 months' current) upon approved references.

NEW DOUBLE-ACTION TINCTURE PRESS.

(REGISTERED.)



THIS Press is intended to supply a want to which attention has recently been directed in the leading journals of Pharmacy, and to place within the reach of Chemists and Druggists a means of removing the maximum amount of menstruum from the marc of Tinctures, and the various preparations for which pressure is required in the Pharmaceutical Laboratory, by the exertion of a power hitherto unattainable without resort to Hydraulics, and at a cost but slightly exceeding that of the ordinary Tincture Press.

The minimum power of an ordinary one-gallon press is admitted to be about four tons, the pressure obtained by the action of the simple horizontal lever and screw; whereas by the further application of the side lever, spiral screw, and cog wheel with which this Press is furnished, the pressure is increased in a ratio of SIX TO ONE, thus giving an equivalent of 24 tons as the least force exerted upon the whole area of the Press, and this after making a MORE THAN USUAL allowance for friction.

The Bed of the Press is furnished with numerous divisions, converging to a central channel, by which the liquid is conveyed through a spout projecting from it, and furnished with a lip upon which the vessel used as a receptacle can be suspended, and the perforated Cylinder is encased in an iron jacket to prevent the escape of the liquid when the Press is in operation.

In order to steady the horizontal lever whilst the Press undergoes the force resulting from the application of the side lever, a strong iron clamp is attached, adjusted by a thumb-screw, as shown in illustration.

Subjoined will be found a few of the many Testimonials received from Purchasers.

DIRECTIONS FOR USE.

The following simple directions, carefully followed, will be found to result satisfactorily:—

Let the Press be FIRMLY SECURED to the slab or table upon which it is to work. Oil the bright parts thoroughly with sweet oil, lubricate the black working parts with free grease, such as goose grease, neat's-foot oil, or tallow, to either of which the addition of a little black lead will be advantageous. For all purposes where a simple pressure is required, use the horizontal lever, and in cases where the extra power is required, apply the side lever after the horizontal lever has been fully exerted.

N.B.—Always relieve the Screw by means of the Horizontal Lever.

PRICE TO THE TRADE.

1 GALLON	...	...	£4 0 0	3 GALLON	...	...	£7 15 0
2 GALLON	...	...	£5 10 0	4 GALLON	...	...	£11 0 0

LESS USUAL DISCOUNT.

TESTIMONIALS.

101 HIGH HOLBORN, LONDON, W.C.,
Messrs. LYNCH & Co.,
December 13th, 1872.
GENTLEMEN,—We beg to say we have used your New Tincture Press with the greatest success for small quantities; we use hydraulic power for the larger preparations. We can with confidence testify as to the strength of the little press we had from you.

We remain, gentlemen, yours faithfully,
BURGESS, WILLOWS & WILLOWS.

HIGH STREET, STOKE NEWINGTON,
January 25th, 1872.
GENTLEMEN,—The Double-Action Tincture Press you supplied me with last year is a decided success. I have used it several times with equally satisfactory results; the saving effected will cover the cost in twelve months.
Yours faithfully, THOS. J. W. TIPPING.

HIGH STREET, COVENTRY,
December 17th, 1872.
GENTLEMEN,—In reference to yours of the 13th inst., I consider that the Tincture Press I had from you is the best hand-press yet made, and capable of giving out quite as much power as you represent. It is as great an improvement with regard to the old-fashioned press as the locomotive of the present day is to that made by Stephenson.
Yours truly, WILLIAM AVIS.

17 ST. GEORGE'S CROSS, GLASGOW,
December 14th, 1872.
GENTLEMEN,—"Lynch's New Tincture Press" is certainly the best I have yet seen or made use of; the pressure one person is enabled to put on seems sufficient for all practical purposes.
I am yours faithfully, J. M. FAIRLIE.
The Glasgow Apothecaries' Co., 34 Virginia St., Glasgow.

2 LONDON STREET, NORWICH,
June 2nd, 1871.
GENTLEMEN,—Enclosed you have cheque for Press, which I am much pleased with. I should be afraid to say how little waste we had in pressing off four gallons Tincture Calumba this morning; the marc was left quite dry.
I am, yours truly, OCTAVIUS CORDER.

93 DEWSBURY ROAD, LEEDS.
June 22nd, 1878.
GENTLEMEN,—In respect of the Press, I am very well satisfied with the working of it. I consider the application of the side lever to make it the most effective press in use for hand power.
Yours truly, ROBERT LESTER.

35 LOW PRIAR ST., NEWCASTLE-UPON-TYNE.
Dec. 12th, 1878.
GENTLEMEN,—The Tincture Press I had from you in October last is a very good one; it has power sufficient for any purpose, and is very suitable for extracting vegetable juices.
Yours respectfully, PHILLIPS SPENCER.

OXFORD,
August 25th, 1878.
GENTLEMEN,—I am very pleased with the working of the Tincture Press you forwarded me recently.
Yours faithfully, HENRY GEO. VARNEY.

Manufactured only by
LYNCH & CO., 171a and 171b Aldersgate Street, London, E.C.



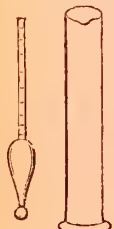
1.-10 6



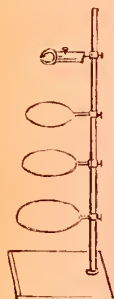
2.-3d. to 2 6



3.-2d. to 3/-



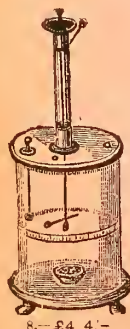
4.-2 6 5.-1 3



6.-3 6



7.-3d. to 4 -



8.-£4 4/-

M. JACKSON & CO.

(J. ORME & H. M. CAPNER),

MANUFACTURERS

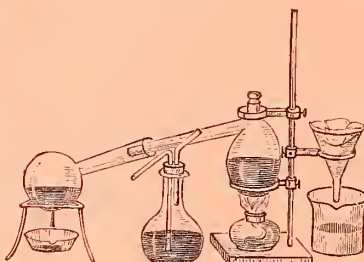
OF

SCIENTIFIC APPARATUS,

AND IMPORTERS OF

Finest BOHEMIAN
and GERMAN
GLASS AND PORCELAIN

**CHEMICAL
APPARATUS,**



ALSO

**PURE
CHEMICALS**
For Analysis,

*By appointment to Her Majesty's Honourable Board of Inland Revenue;
Science and Art Department and Government Schools at South
Kensington; the Pharmaceutical Society of Great Britain,
&c., &c.*

APPARATUS SECURELY PACKED FOR THE COLONIES & FOREIGN PARTS.

**PROF. HUGHES'
MICROPHONE.**

Price 3s., 7s. 6d., 15s., and 21s. each.

CASH WITH ORDER.

The 3s. MICROPHONE is on ebonite base.
The 7s. 6d. MICROPHONE is on polished mahogany.

The 15s. MICROPHONE includes a suitable battery and 10 yards of conducting wire.

The 21s. MICROPHONE is on a large polished mahogany stand, with two-cell patent battery and 20 yards guttapercha-covered conducting wire.

These MICROPHONES, when placed in circuit with a Telephone and suitable battery, will transmit and render audible through the Telephone the most minute sounds, such as the tramp of a fly in walking. Articulate speech is also transmitted with great facility, so that by their use the Telephone is rendered quite applicable for practical business purposes.

**HICKLEY'S PATENT
TELEPHONES.**

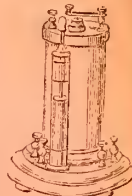
Price 40s. and 50s. per pair.

CASH WITH ORDER.

These Telephones have been tested up to 200 miles, and will transmit conversation through that distance with perfect ease. They are in use at the Railway Clearing House, Euston Square, London, and numerous other large Establishments.



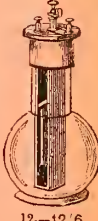
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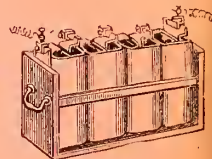
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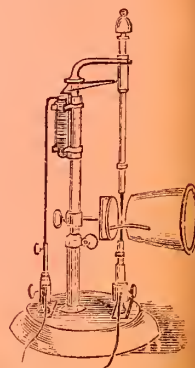
11.-14 6



12.-12 6



13.-£1 15/-

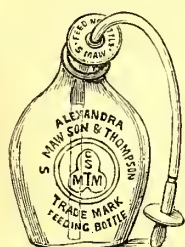


14.-£3 3/-

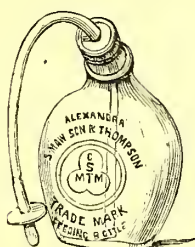
Price List & Special Quotations on application.

65 BARBICAN, LONDON.

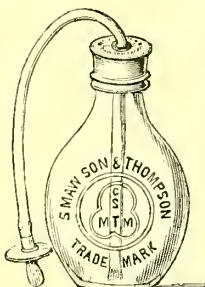
S. MAW, SON & THOMPSON'S FEEDING BOTTLES.



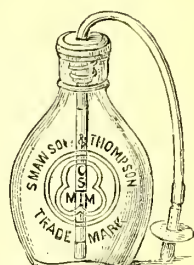
1/-, 1/6, & 2/6.
Alexandra Feeding Bottle.
Earthenware Cap.



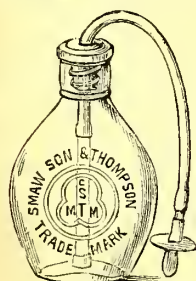
1/6.
Alexandra Feeding Bottle.
Screw Glass Stopper.



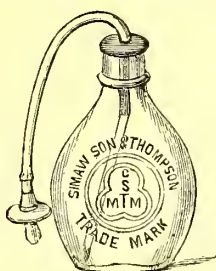
1/-.
Export Feeding Bottle.
Earthenware Cap.



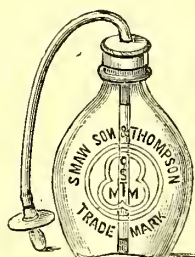
1/-.
Export Feeding Bottle.
Screw Glass Stopper.



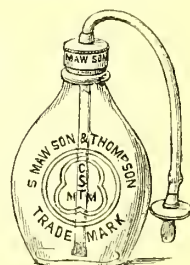
6d.
Export Feeding Bottle.
Screw Glass Stopper.



6d.
Export Feeding Bottle.
Wood Top Cork.



6d.
Export Feeding Bottle.
Screw Metal Cap.



6d.
Export Feeding Bottle.
Metal Cap.

MAW'S "ALEXANDRA."

	£	s.	d.
Green Glass, WOOD TOP corks, in boxes of 1 doz.			
per doz.	0	3	6
White Glass, EARTHENWARE caps, and each with tube brush, in neat box . . . per doz.	0	7	0
White Glass, SCREW GLASS stoppers, and each with tube and bottle brush, in boxes . per doz.	0	10	0
White Glass, EARTHENWARE caps, extra teat, glass tube and valve, and with tube and bottle brush, in boxes . . . per doz.	0	10	0
White Glass, SCREW METAL caps, extra teat, glass tube and valve, and with tube and bottle brush, in boxes . . . per doz.	0	10	0
White Glass, GILT PORCELAIN caps, superior fittings, brown indiarubber tubing and teat, tube and bottle brush, extra indiarubber tube and teat, and with glass tube and valve, in strong boxes per doz.	0	18	0

MAW'S "EXPORT."

	£	s.	d.
Green Glass, SCREW GLASS stoppers, in boxes of 1 doz. per doz.	0	4	0
Green Glass, SCREW METAL caps, in boxes of 1 doz. per doz.	0	4	3
Green Glass, METAL caps, in boxes of 1 doz. per doz.	0	3	9
Green Glass, WOOD-TOP corks, in boxes of 1 doz. per doz.	0	3	4
White Glass, EARTHENWARE caps, and each with tube and bottle brush, in neat box . per doz.	0	6	8
White Glass, SCREW GLASS stoppers, and each with tube and bottle brush, in neat box per doz.	0	7	0
White Glass, SCREW METAL caps, and each with tube brush, in neat box . . . per doz.	0	7	6

A LIBERAL DISCOUNT TO LARGE BUYERS.

S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London.

CHEMISTS' TRANSFERS.

32 LUDGATE HILL, LONDON (14 Doors from St. Paul's Churchyard).

MESSRS. ORRIDGE AND CO., CHEMISTS' TRANSFER AGENTS,

May be consulted at the above address on matters of SALE, PURCHASE, and VALUATION.

Immediate attention given to Foreign Commissions.

The Business conducted by Messrs. ORRIDGE and Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade.

VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment.

PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

N.B.—NO CHARGE TO PURCHASERS.

1.—LONDON	Returns £1,500.....	Price £1,600	10.—KENT (Mixed)	Returns £400.....	Price £200
2.—LONDON, N.	" £8 pr. week ..	400	11.—LIVERPOOL	" 500.....	" 450
3.—LONDON, E.	" £5 to 6 ..	250	12.—MIDDLESEX	" £800 to 900.....	" 700
4.—LONDON, S.E.	" £4 ..	250	13.—NOTTINGHAMSHIRE	" 5,000.....	£100 and valuation
5.—BRISTOL (Suburb)	" 950.....	950	14.—NORFOLK	" 400.....	Price £230
6.—DEVON (SOUTH)	" 500.....	300	15.—SUSSEX (Seaside)	" £600 to 700.....	" 700
7.—DEVON (EAST)	" 420.....	350	16.—SUSSEX (Seaside)	" 12 pr. week ..	" 700
8.—HANTS (Seaport)	" 720.....	600	17.—SOMERSET (Seaside)	" £8 to 9 ..	" 350
9.—ISLE OF WIGHT	" 700.....	500			

*Particulars of other Businesses, Town and Country, on application.***ORRIDGE & CO., 32 Ludgate Hill, E.C.****MIDLAND COUNTIES TRANSFER AGENCY.****F. J. BRETT,****VALUER TO THE TRADE,
LEICESTER.**

All kinds of Chemists' Stock and Fixtures valued. Partnerships arranged. Particulars of different classes of Businesses forwarded to Buyers.

Through this Agency Businesses are disposed of quickly, and with as little publicity as possible.

F. J. BRETT, having relinquished the Retail, is now enabled to devote the whole of his time to Transfers and Valuations.

Terms on application. May be consulted personally or by letter upon matters in connection with the Trade *entirely free of charge.*

PETERBORO.—Good corner shop in rapidly increasing district; returns £360; for £70.

MIDLANDS.—Good General Retail in a principal town; excellent position for doing a large agricultural trade; returns £1,100; for about £600.

WALES.—Good General Retail and Prescribing; returning £800; for £500 or valuation.

LIVERPOOL.—Light Retail and Dispensing; returns £500; for £380.

WORCESTERSHIRE.—Light agricultural Retail; no paints; returns £1,100; at valuation. Good country Retail within an hour of town; returns £800; good house and shop on long lease at low rent; price about £700.

LINCOLNSHIRE.—Good country mixed trade; returning £1,000; Post Office worth £55 per annum; commanding shop and premises, with good garden, &c.; small amount of grocery; at valuation of stock and fixtures.

LANCASHIRE.—Good country village trade, capable of great extension; double-fronted shop, good house, &c.; rent £25 10s.; no opposition; returns last year £450; about £300 at valuation.

LEICESTERSHIRE.—Unopposed light Retail in suburb of 6000 inhabitants; returns £500; could be greatly increased with personal attention; at valuation about £250.

NOTTINGHAM.—General light Retail; returning £600; Post Office about pays rent; for £500.

LONDON (near).—Very large well-fitted shop; stock in good condition; fixtures alone cost £1,000; good class Retail with dispensing; vendor, being desirous of at once leaving the trade, will sell for a lump sum of £400.

And numerous others to suit all classes.

Post cards will not be noticed.

F. J. BRETT, LEICESTER.**MR. T. TRIPPIER,****Transfer Agent and Valuer,****79 ISLINGTON, LIVERPOOL.**

ESTABLISHED 1850.

FOR TRANSFER.

IN THE SUBURBS OF LIVERPOOL.—A Dispensing, Prescribing, and Light Retail Business; neatly fitted; corner shop; established 10 years; price £200.

LINCOLNSHIRE.—An old-established Business, returning £500 per annum in Prescribing and General Trade; good position; corner shop at low rent.

MANCHESTER.—A *bonâ-fide* Business, established 15 years, returning £500 per annum; pleasant situation; low rent.

AFAMILY and DISPENSING BUSINESS, situate in a very pleasant part of Liverpool; established 30 years; commanding position, corner shop, good house.

LIVERPOOL.—In a populous neighbourhood, a Prescribing and Dispensing Business; old-established.

SOUTH STAFFORDS.—A light Retail, Prescribing, and Dispensing Business; established 10 years; compact and neatly fitted shop; rent low; at a valuation.

All information on application. Parties applying for the first time will please to send reference to ensure a reply.

Lists of Stock for Appraisal receive immediate attention.

No Commission charged to Purchasers.

TO CHEMISTS, DRUGGISTS, AND SURGEONS.**MR. GRIMWADE**

(Of the Firm of Grimwade, Ridley & Co., 4 Great St. Helen's, London, and 69 St. Clement's, Ipswich),

Is prepared to undertake Sales, Transfers, Valuations, Arbitrations, &c., in any part of the Kingdom.

BUSINESSES WANTED.

WANTED, a good mixed Country Business, where about £1,000 may be invested. Strict confidence observed. Send full particulars to Delta, Abbey Street, Derby.

BUSINESSES to be DISPOSED OF.

BRIGHTON.—Chemist's and Druggist's Business, established 10 years, for immediate Disposal; main thoroughfare, close to station; rent moderate; 400 guineas if closed with at once. Apply to Mr. Elliott, Accountant, 54 Ship Street, Brighton.

CHEMISTS AND DRUGGISTS.—For Disposal, owing to death of proprietor a Wholesale and Retail Business in Stockport; shop handsomely fitted, and very good warehousing; established 27 years; stock and fixtures at a valuation. Apply, 22 Chestergate, Stockport.

MIXED BUSINESS, Immediate Sale; nine miles from Birmingham, in a town of 18,000 inhabitants; no opposition; this is a rare opportunity; good reasons for disposal; price, between 700*l.* and 800*l.* Address, T., care of Southall & Co., Birmingham.

FOR IMMEDIATE DISPOSAL.—A high-class Retail and Dispensing Business situated in one of the largest commercial cities in England; turning upwards of £1,400 with large profits. "Bona fides," care of Messrs. Barron, Squire & Co., 5 Coleman Street.

MR. HINE GILBERT has now to direct attention to a Good Business in the best suburb of London; returning £750; rent £50; on long lease; premises in main road; good class trade at full prices; premium 100*l.*; part down. Full particulars at the Transfer Offices, 17 Hart Street, Finsbury Square.

LIVERPOOL.—For Disposal at a valuation, a handsomely-fitted Pharmacy in a prominent central corner position; large house; no heavy trade; turns over £450 per annum; very profitable; everything in first class condition; a very desirable concern. Address, S. C., Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street.

IMMEDIATELY.—A Branch Drug Business, in the principal thoroughfare of a rising town in the North of England; established about 2 years; satisfactory reasons given for its disposal; present returns about 450*l.*; price, 300*l.*, part of which may remain on satisfactory terms. Apply to Messrs. John Ismay & Sons, Wholesale Druggists, Newcastle-on-Tyne.

3,000*l.*—For Immediate Disposal, Extensive Premises (Freehold) in which a Chemist's and Druggist's Business has been carried successfully for many years past, in a large market town in an Eastern County; satisfactory reason given for disposal; only another chemist within 10 miles; part purchase may remain. Apply, J. D. Smith, Esq., Norwich.

FOR DISPOSAL.—A neatly-fitted and well-stored Shop, recently opened in a large and rapidly-increasing neighbourhood; good house. To one with a knowledge of Cheap Prescribing this is a rare opportunity. Stock and fixtures cost over £300. Price, including 24 years' lease, at low rental, and several good proprietary articles, £300. Address, P. M., care of Mr. Inglis, Cranfield Road, Brockley, S.E.

FOR DISPOSAL.—Genuine retail; established 8 years; in one of the busiest thoroughfares in Birmingham; returns about £100, under assistants' management; might be easily doubled by an energetic person with small capital; rent only £24 per annum. Price, goodwill, fixtures, and excellent stock, all at £200. Address, George B. Toy, Ferry Bar, Birmingham.

50*l.*—To be sold a ready-money Light Retail, situated in the most flourishing mining and agricultural village in South-West Lancashire; returns near £6 (under management), population 5,000; a first-rate chance for a person with small means, and used to a mixed trade; stock at valuation; gross price about £150; payment by instalments; no opposition. Mr. Tring, Post Office, Stoke-on-Trent.

IMMEDIATELY.—Prescribing and Retail; established 10 years; populous thoroughfare, S.E.; 8 years present hands; double plate-glass front; many fittings, glass cases, and good stock; convenient house, rent £55. Turns about £5 weekly; could be greatly increased; price £250; well with attention of Prescriber or Medical Man; owner leaving trade; references to well-known Chemists. Address, V. R., Messrs. Hodgkinsons & Co., 127 Aldersgate Street, E.C.

GENUINE Family Dispensing and Agricultural Business. Established over a century, and in present hands 15 years; returning about £1,200; two-thirds of which is ready money; handsomely fitted and well-stocked shop; large and commodious house, with private entrance and every convenience; on lease; 13 years unexpired; to an immediate purchaser it will hold for valuation of stock and fixtures only; no goodwill. Particulars from E. T., Elmstead House, Great Malvern.

SITUATIONS AT HOME.

The Proprietors of "THE CHEMIST AND DRUGGIST," anxious to make their Journal more than ever the medium of communication between Employers wanting Assistants, and Assistants wanting Situations, have decided henceforth to print that class of Advertisements on a separate sheet, as well as in the body of the Journal, and this separate sheet will be forwarded post-free to any address on the 15th of the month on receipt of a penny stamp. The Proprietors will be much obliged if Chemists' Assistants will make this announcement known as generally as possible, as it is in their interest that the plan is proposed.

EMPLOYERS WANTING ASSISTANTS.

APPRENTICE Wanted, or one who has served part of his time (out-door), by J. Stewart, Chemist, Grantam.

WANTED, the end of January, where two apprentices are kept, a steady and industrious young man as Dispenser, who can be well recommended. Apply, stating height, age, and references, to Geo. Shepperley, Pharmaceutical Chemist, Long Row, Nottingham.

WANTED, a Married Man (without family preferred), to take Sole Charge of small Retail and Prescribing Business. Can have rooms on the premises, partly furnished. State salary required, age, references, and when disengaged, to H. Firman, Chemist, Great Yarmouth, Norfolk.

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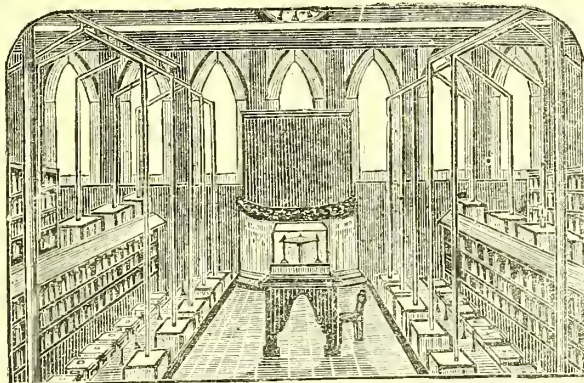
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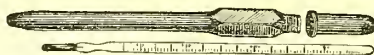
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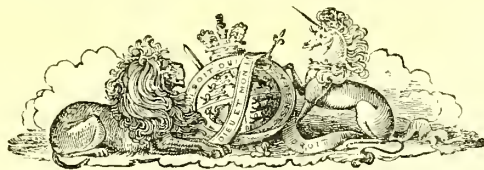
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Jones, William Henry

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Marshall, Arthur Willis
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McBeath, John William
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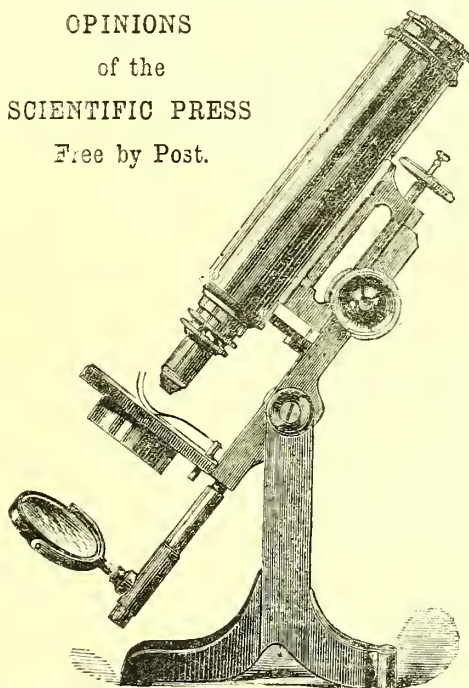
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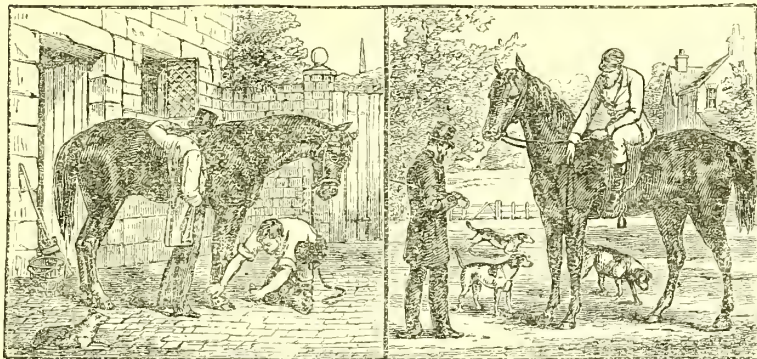
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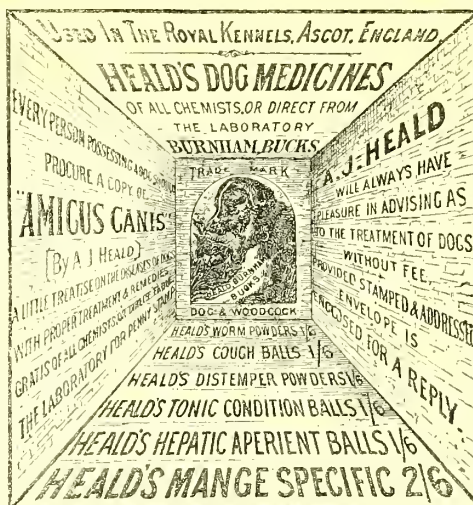
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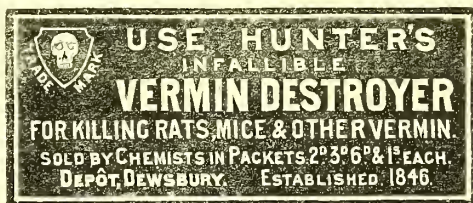
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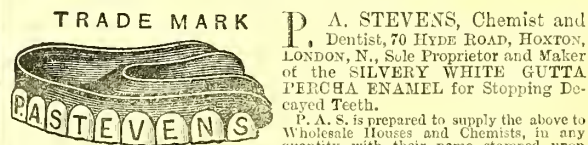
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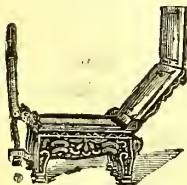
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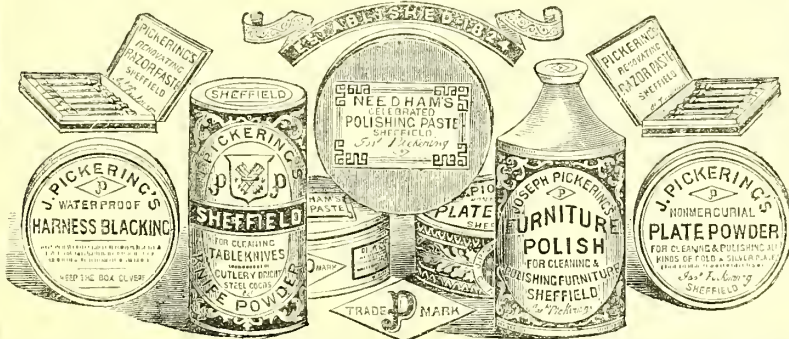
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Special Articles particularly noted for their excellence:

TOILET SOAPS. Per doz.			BOUQUETS. Per doz.			POMADES, &c. Per doz.		
<i>Cent-Fleur (copyright)</i>	2/6	Boxes of 3 tablets 20/	<i>Cent-Fleur (copyright)</i>			<i>Cent-Fleur (copyright)</i>	8/	12/ & 20/
<i>Jockey Club</i>	1/6	" 12/	<i>Inimitable</i> ...	In Glass	1 oz.	<i>Petroleum Pomade</i> ...	12/	& 18/
<i>Musk Windsor</i>	1/6	" 12/	<i>Pearl of Perfumes</i> ...	Stopped	2 oz.	<i>Brilliantine</i> ...	8/	12/ & 20/
<i>Sandringham</i>	1/6	" 12/6	<i>Stephanotis</i> ...	Sprinkling cap	18/	<i>Anglo Eau de Cologne</i>	8/	& 12/
<i>Eucalyptus Oil</i>	1/6	" 12/	<i>White Rose</i> ...	Bottles.	3 oz.	<i>Eucalyptus Vinegar</i> ...	12/	& 20/
<i>Semi-Cut Bars</i>	1/	Boxes of 6 kinds 8/6	<i>Ylang-Ylang</i> ...		24/	<i>White Cherry Tooth Paste</i>	8/	& 12/

TRADE PRICE LISTS SENT AND ORDERS EXECUTED THROUGH WHOLESALE HOUSES, OR DIRECT FROM THE MANUFACTURERS,
WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore St., City, London.

F. A. SARG'S SON & CO.'S CHEMICALLY PURE GLYCERINES AND TOILET GLYCERINE ARTICLES.

CHEMICALLY PURE GLYCERINES.

Sarg's Double Distilled Glycerine, Chemically Pure,

30° Beaumé, in Cases of Four 56-lb. Tins each; Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100 ½-lb. Bottles, with Registered Label.

Sarg's Double Distilled Glycerine, Chemically Pure,

In ½-lb. and 1-lb. Bottles, should have a place in every nursery on account of its salutary action on the heads of children, relieving them from dandruff and the roughness of the scalp they are so commonly subject to.

Sarg's Distilled Glycerine, Chemically Pure, P.B.,

29° Beaumé, in Cases of Four 56-lb. Tins each.

Crude Glycerine, in Bulk.

TOILET GLYCERINE ARTICLES.

Transparent Glycerine Soap,

In registered Packets of three Tablets, 1s. Warranted to contain 33% of the purest Glycerine. Also in round Tablets, three in a Box; and in oval Tablets in paper.

Liquid Glycerine Soap,

Best preventive against chapped hands, 1s., and unrivalled for imparting softness to them, and rendering them clean and white. See Testimonials of Professor J. von Liebig, Baron; and of Professor F. Wöhler.

Scented Glycerine,

In Bottles at various prices. Either pure or diluted with water, this Glycerine is very successfully used for softening the skin, preserving the complexion, and preventing the very unpleasant roughness of the skin in cold weather.

Glycerine Cream

Is quite unequalled for imparting a fresh and healthy colour to the lips and keeping them from chapping.

Sarg's new Carbolic Glycerine Soap,

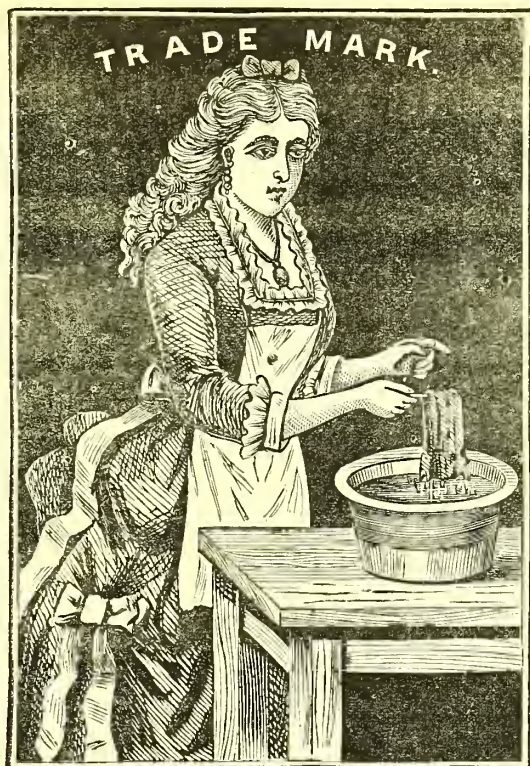
In Boxes of three Tablets, is highly recommended as a most effective disinfectant.

Sold by all Wholesale Chemists and Druggists.

Sole Wholesale Agents for the United Kingdom:

SCHMEDES, ERBSLOH & CO. (IMPORTERS OF CHEMICALS AND DRUGS), 6 CASTLE STREET, FALCON SQUARE, LONDON, E.C.; AND MELBOURNE, AUSTRALIA.

NOTICE!



CAUTION!

E. CRAWSHAW & CO., ANILINE DYE MERCHANTS,

15 CHARTERHOUSE STREET, FARRINGDON STREET, LONDON, E.C.,

Beg to announce that they have Registered the above figure of a Lady, going through the operation of Dyeing, as their **TRADE MARK**; and they also beg to state that they will protect themselves from all infringements or colourable imitations of the above **TRADE MARK**.

Crawshaw's Crystal Dyes are now put up in the following manner:—

- | | | |
|----------|---|--|
| 6 | D. BOXES CRAWSHAW'S CRYSTAL DYES, | in $\frac{1}{2}$ -gross (7 dozen) Counter Cases, with Glass lid, 48s. per gross. |
| 6 | D. BOXES CRAWSHAW'S CRYSTAL DYES, | in Boxes of 1 dozen (14), 48s. per gross. |
| 3 | D. PACKETS CRAWSHAW'S USEFUL DYES, | in $\frac{1}{2}$ -gross Boxes, 21s. per gross. |
| 3 | D. PACKETS CRAWSHAW'S USEFUL DYES, | on Cards of $\frac{1}{2}$ -gross, 21s. per gross. |
| 2 | D. PACKETS CRAWSHAW'S USEFUL DYES, | on Cards of $\frac{1}{2}$ -gross, 14s. per gross. |
| 2 | D. PACKETS CRAWSHAW'S USEFUL DYES, | in $\frac{1}{2}$ -gross Boxes, 14s. per gross. |
| 1 | D. PACKETS CRAWSHAW'S USEFUL DYES, | in $\frac{1}{2}$ -gross Boxes, 7s. per gross. |
| 1 | D. PACKETS CRAWSHAW'S USEFUL DYES, | on Cards of $\frac{1}{2}$ -gross, 7s. per gross. |

EMERALDINE { A New Colour for Chemists' Show Bottles, which gives, with transmitted light, a beautiful Golden Colour, showing a splendid Green fluorescence } **2s. 6d. per Bot.**

USUAL TERMS. TO BE HAD FROM ALL THE WHOLESALE HOUSES.

To those Chemists who may not have tried CRAWSHAW'S DYES, it may be as well to recapitulate that Crawshaw's Dyes are six times as cheap as the Liquid Dyes, and more beautiful colours. There is sufficient in one 6d. Box to Dye a Lady's Dress.

SOLE MANUFACTURERS,

E. CRAWSHAW & CO., 15 CHARTERHOUSE STREET, LONDON, E.C.

AWARDS:
London and
Vienna
Exhibitions

Wood Stains,

AWARDS:
London and
Vienna
Exhibitions

IN LIQUID AND POWDER.

Packed in 1-lb., $\frac{1}{2}$ -lb., $\frac{1}{4}$ -lb., and 2-oz. Boxes, $\frac{1}{2}$ -pint 6d. Bottles, and bulk.

Specimen Boards and Circulars supplied when ordered.

MANUFACTURER,

THOMAS S. JACKSON,

199 BOROUGH, LONDON, S.E.,

And of all Patent Medicine Warehousemen. Write for New Price Lists of Oil and Spirit Varnishes, Colours, Paints, &c.

WOODS' ARECA NUT TOOTH PASTE.

For Removing Tartar and Whitening the Teeth, without injuring the Enamel. Sold in Pots, at 6d. and 1s. each.

WOODS'

QUININE, CANTHARIDINE, & ROSEMARY HAIR CREAM

(WITH GREASE), Restores the Hair if weak or falling off. Price 9d., 1s. 6d. and 3s. 6d. per bottle.

WOODS'

QUININE, CANTHARIDINE, & ROSEMARY HAIR WASH,

Similar to the above (without grease). Price 1s. 6d. and 3s. 6d. per bottle.

WOODS' DANDRUFF POMADE.

Never fails. 1s. per pot.

Proprietor: W. WOODS, M.P.S., Chemist, Plymouth.

SOLD WHOLESALE BY ALL LONDON HOUSES.

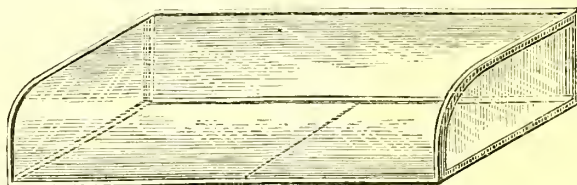
E. NATALI,

SHOP FITTER AND GLASS SHOW CASE MANUFACTURER,

207 OLD STREET (Opposite Great Eastern Street), CITY ROAD, LONDON, E.C.

WORKS—HOXTON.

CIRCULAR-FRONT GLASS COUNTER CASES.
LOOKING GLASS BACKS.



BENT PLATE GLASS COUNTER CASES,

Glass Ends, Spring Fastenings, Looking Glass Backs, Velvet Lined.

MAHOGANY, PLAIN OR EBONIZED.

Long	Wide	Deep	£	s.	d.	Long	Wide	Deep	£	s.	d.
30	x	17	x	8...	2 5 0	48	x	20	x	8...	4 10 0
36	x	17	x	8...	2 14 0	60	x	20	x	8...	6 5 0
36	x	20	x	8...	3 3 0	72	x	20	x	8...	7 10 0

Flat Plate Glass Cases, 20 in. wide, 21s. per foot run.

Looking Glass, Carboys, Specie Jars, Desks, and Chemists' Fittings and Utensils in Stock, Bought, or Exchanged.

Cases and Fittings to any Design. Estimates free. SHOPS NEWLY FITTED COMPLETE FROM £70.

ROUND AND OVAL CHIP AND WILLOW BOXES

Of any size, in the very best quality that can possibly be made. Large stock kept in London. Any buyers of these goods should compare my Samples and Prices before ordering elsewhere.

PAUL METZ, Manufacturers' Agent,

19 & 20 HAMSELL STREET, FALCON SQUARE, LONDON, E.C.

Bankers, London and Westminster Bank, Lothbury, E.C.

STOKOE'S CELEBRATED SHEEP-DIPPING POWDER

EFFECTUALLY CURES THE SCAB,

Totally prevents the attack of the MAGGOT FLY, destroys all TICKS and LICE, and materially increases the growth of the Wool. Preference is invariably given to this Dip where it has been once used.

Retailed by CHEMISTS ONLY, in Packets 1s. 4d. each, sufficient for Twenty Sheep.

It will keep any length of time in any climate, and is, therefore, the best dip for export.

MANUFACTURED BY

T. STOKOE, M.R.C.V.S.,

Chemical Works,

HAY, SOUTH WALES.

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

Goddard's Plate Powder

For more than a Quarter of a Century this Powder has sustained an unrivalled reputation throughout the United Kingdom and the Colonies as the BEST and SAFEST article for Cleaning Plate.

Sold in Boxes, 1s., 2s. 6d., and 4s. 6d. each. Also

GODDARD'S FURNITURE CREAM. Sold in Bottles, 6d. and 1s. each.

Sold by leading Wholesale Houses and Factors, and by the Inventor,

J. GODDARD, STATION STREET, LEICESTER.

FOR CLEANING PLATE.

BRADLEY & BOURDAS'S

ALBATUM or WHITE ROUGE,

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 7 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.

G. B. KENT & CO.,

IMPORTERS OF BRISTLES. BRUSH MANUFACTURERS, IMPORTERS OF SPONGE.

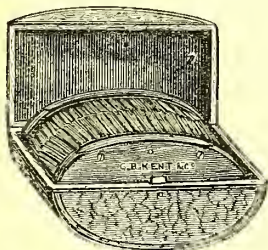
11 GREAT MARLBOROUGH STREET, LONDON, W.

SILVER MEDAL]

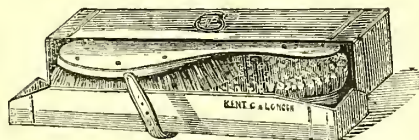
ESTABLISHED 1877.

[PARIS, 1868.

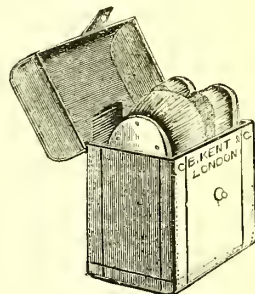
Kent's Solid Leather Cases, Fitted with Brushes, &c., &c.



Cases in Alligator Skin.



Solid Leather Cases, Fitted.



Cases only to contain one pair of Military Hair Brushes 3s. each.

KENT'S TOOTH BRUSHES

Are manufactured at their Factory at Victoria Park, expressly set apart for this one description of Brush.



Price per dozen.

First Quality	<i>C.B. Kent & Co</i>		<i>London</i>	6/6
Second Quality	<i>Imperial</i>		<i>Quality</i>	5/0
Third Quality	WARRANTED		LONDON	4/0
Fourth Quality	WARRANTED		SECURE	3/6
Fifth Quality	WARRANTED		SOUND	3/0

Badger Hair Tooth Brushes ..	4/6	6/0	8/0	10/0	per doz.
Children's ..	3/0	3/6	4/0		
Tooth Brush Guards ..	Metal, 3/3	Porcelain, 5/0			
Japanned Wet Brush Holders ..	3/3	5/6	6/6	13/0	

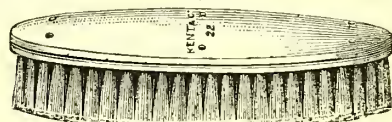
SHAVING BRUSHES.

Prepared Hair ..	2/0	4/0	6/0	7/6	9/0	12/0
Badger ..	8/0	9/6	14/0	18/0	21/0	24/0 28/0 32/0

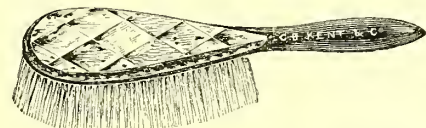
KENT'S NAIL BRUSHES.



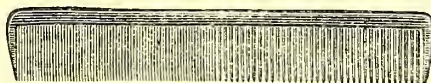
Pent Back ..	4/0	7/0	8/6	10/6	12/0	14/0
Round End ..	4/0	7/0	8/6	11/0	13/0	15/0
Roached Grooved ..	19/0	24/0	28/0	32/0	36/0	40/0



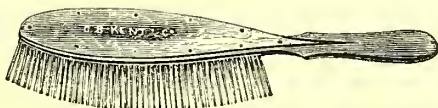
No.	22-0	22	23	24	
	8/6	13/0	17/6	22/0	
Handled Nail Brushes ..		4/0	4/6	7/0	8/0 10/6 12/0 16/0 per doz.
Wood ..	Trepanned	12/0	16/0	18/0	21/0 24/0 27/0 "
" ..	Fibre	21/0	27/0	30/0	36/0 42/0 48/0 54/0 per grs.



KENT'S HAIR BRUSHES, IN WOOD, IVORY, SHELL & PEARL.



KENT'S COMBS, IN INDIA RUBBER IVORY, OR SHELL.



KENT'S CLOTH BRUSHES, IN WOOD AND IVORY.



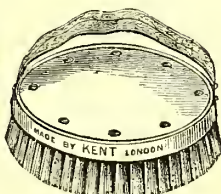
KENT'S ROACH CLOTH BRUSHES.



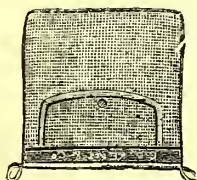
KENT'S HAT BRUSHES, IN WOOD AND IVORY.



KENT'S HAND MIRRORS.
Manufactured by
G. B. KENT & Co.'s
PATENT MACHINERY.
Are unsurpassed for Price
and Quality.



KENT'S FLESH BRUSHES.



SPONGE BAGS OF ALL KINDS.

KENT'S PAINTING BRUSHES are of the highest quality, and warranted of standard sizes. **KENT'S HOUSEHOLD AND STABLE BRUSHES** of every description.

G. B. KENT AND CO.'S ILLUSTRATED PRICE CURRENT FOR 1879, FREE ON APPLICATION.

C. J. KING,
HUMAN HAIR MERCHANT,
HAIRDRESSERS' SUNDRYMAN,
 And Importer of Perfumery & Fancy Goods,
 5, 6, & 7 HOLBORN BARS,
 LONDON, E.C.



TRADE MARK.



TRADE MARK.

COMBS, BRUSHES, MIRRORS, CUTLERY.
FRENCH PERFUMERY—E^D. PINAUD'S and DEMARSON, CHETELAL & CO.

PATENTEE OF THE
IVORIDE DRESSING COMBS.
 THESE COMBS BEAR THE NEAREST RESEMBLANCE TO IVORY.

GOLDEN HAIR.

G. DOREZ'S
GOLDEN
For the

TRADE MARK.



TRADE MARK.

AUREOLUS.
FLUID
Hair.

GOLDEN HAIR.

This preparation produces one of the most beautiful and fashionable tints that have been conveyed to the Human Hair. It converts Hair of any colour to tints varying from the richest auburn to the most brilliant golden or sunny hue. It is perfectly harmless and free from smell. In all instances it has given the greatest satisfaction; and is, as a genuine and profitable article, recommended to the Trade. Pamphlets and Handsome Show Cards.

5s. size, price 30s. per dozen.

Sole Agent: C. J. KING, London.

AMERICAN BAY RHUM.

TRIPLE DISTILLED. The only true Universal & Genuine Article.
 Distilled from the leaves of the Bay Tree (Myrciactris).

THIS ARTICLE COMMANDS A READY SALE.

This delicate Spirit has acquired a great popularity in America and the West Indies. It is an indispensable Eau de Toilet for the Nursery and Bath, and is an effective remedy for Headache, Nervousness, and Rheumatic Pains. It also alleviates irritation of the skin after shaving or from change of temperature, and removes all impurities from the skin.

ENGLISH LAVENDER WATER. Much admired for its lasting fragrance.

LIME JUICE
 AND
GLYCERINE.

This valuable toilet preparation for the Hair is highly recommended on account of its nutritive and restorative properties.

Attractively put up in Round Shouldered White Glass Bottles.

3 ozs.	4 ozs.	6 ozs.	8 ozs.
2s. 9d.	3s. 6d.	5s. 3d.	7s. per doz.

C. J. KING, 5, 6, & 7 HOLBORN BARS, LONDON, E.C.

THE FOLLOWING ARTICLES ARE PREPARED AND PACKED BY

JAMES C. CHUBB,

Who will forward a more Complete List on Application:

BEST SEIDLITZ POWDERS,

Loose, 7s. per gross, and in boxes at 8s., 9s. and 10s. per doz.;

CARBONATE OF SODA,

1oz. packets, 7lb. boxes, 2s. each. 30s. per cwt.; best do., 3s. 6d. each, 48s. per cwt.;

EPSOM SALTS,

1oz. packets, 7lb. boxes, 1s. 3d. each, 18s. per cwt.; **HOWARD'S** ditto,
1s. 9d. each, 25s. per cwt.;

EXTRA SCENTED VIOLET POWDER,

Prepared with WHEATEN STARCH, 1d. and 2d. boxes, 7s. and 14s. per gross;

$\frac{1}{4}$ lb. packets, 2s. 6d. per doz.;

Prepared Fullers' Earth,

1d. and 2d. boxes, 7s. and 14s. per gross; $\frac{1}{4}$ lb. and $\frac{1}{2}$ lb. boxes, 2s. and 4s. per doz.,

Through the Wholesale Houses, or from

**29 OLD STREET,
LONDON, E.C.**

Infants' Feeding Bottle Manufacturer for the Million.



WILLIAM MATHER,

WHOLESALE AND EXPORT

DRUGGISTS' SUNDRIESMAN,



Manufacturer of Court Plaister, Goldbeaters' Skin, and Surgical Plaisters, Surgical Instruments and Medical Glass,

LONDON AND MANCHESTER.

MATHER'S NIGRINE
A JET BLACK MARKING FLUID,
FOR MARKING LINEN, COTTON &c
NO PREPARATION OR HEATING REQUIRED AFTER BEING WRITTEN

Nigrine obtained Hon. Mention, Paris Exhibition, 1878.

ALL CHEMISTS & STATIONERS
SELL

MATHER'S NIGRINE.

IN BOTTLES AT

6d., 1s., 2s. 6d. & 5s. each.

Samples sent post free on receipt of
Thirteen Stamps.

Ladies will find an interesting and agreeable occupation in using MATHER'S NIGRINE for Etching Fern Leaves, Rustic Scenery, Views, &c., on cloth, which may be used for dessert doyleys, antimacassars, toilet mats, and sundry other ornamental and useful work, as, from the finer lines remaining distinct after repeated washing, very satisfactory results may be obtained from this fluid, which is not the case with any other marking ink.

The following ADVANTAGES are Gained by Using

MATHER'S NIGRINE.

- 1st.—NO WARM IRON or HEATING required.
- 2nd.—NO PREPARATION, MIXING, or WASTE.
- 3rd.—NO fear of SCORCHING or BURNING the Cloth.
- 4th.—Can be used with a STEEL or QUILL Pen, BLOCKS, or STENCIL PLATE, for Monograms.
- 5th.—The BOTTLES contain DOUBLE the QUANTITY of ordinary Marking Inks.
- 6th.—Becomes, when washed, a JET BLACK, which gets DARKER with repeated washings and age.
- 7th.—Cannot be removed by ANY CHEMICAL MEANS.
- 8th.—Will Not Injure the most delicate Fabric.
- 9th.—Flows Readily from the Pen.

TRADE PRICE OF
MATHER'S NIGRINE.

Per dozen—
3s. 6d., 7s., 18s., 36s.

A Liberal Discount to Large Buyers.

Extract from *The Lancet*, Jan. 5th, 1878.

NIGRINE:
A Jet-Black Marking Fluid.
(W.M. MATHER, Farringdon Road, London.)

We can recommend this as a very good and convenient Marking Ink. We have submitted Linen marked with it to some of the most powerful of Chemical Agents, including Acids, Alkalies, and Chlorine, and Cyanide of Potassium, and have found that it was very much easier to destroy the Linen than the marking upon it; in fact, the writing could not be effaced by any of the agents we employed.



ALL "MATHER'S NIGRINE"

Will stand Boiling in the following Solutions, whereas Marking Inks made with Silver will not:—

SOLUTION:
Cyanide of Potassium,
Caustic Potash,
Caustic Soda,
Chloride of Lime or
Bleaching Powder.

MATHER'S IMPROVED FEEDING BOTTLE, SIXPENNY SIZE, 3/6 PER DOZ.

MATHER'S IMPROVED FEEDING BOTTLE, SHILLING 6/-

MATHER'S LATEST IMPROVED NEW FEEDING BOTTLE, "THE PRINCESS,"

With Porcelain Fittings, 7s. per doz. | With Boxwood Top Corks, 3s. 6d. per doz.

With Pure Tin Screw Cap and Patent Valve, 12s. per doz.

MATHER'S CHEMICAL FLY PAPERS { For Poisoning Flies, Wasps, } **20/-** { Per 1,000
Ants, Mosquitoes. Sheets.

MATHER'S ROYAL BALSAMIC PLAISTERS, ON LEATHER.

SPECIALITIES.

MATHER'S Adhesive Spread Plaister.
MATHER'S Alexandra Breast Exhauster.
MATHER'S Balsamic Plaisters.
MATHER'S Bunion Plaisters.
MATHER'S Benzoline.
MATHER'S Cod Liver Oil Plaisters.
MATHER'S Cough Lozenges.
MATHER'S Corn Plaisters.
MATHER'S Court Plaister.
MATHER'S Chemical Fly Papers.
MATHER'S Chlorodyne Lozenges.

MATHER'S Chest Protectors.
MATHER'S Emp. Cer. Saponis.
MATHER'S Elastic Gum Bongies.
MATHER'S Elastic Gum Catheters.
MATHER'S Elastic Stockings, Belts, &c.
MATHER'S Flesh Gloves and Rubbers.
MATHER'S Indiarubber Syringes, &c., &c.
MATHER'S Indiarubber Teats, &c.
MATHER'S Indiarubber Tubing.
MATHER'S Marking Ink.
MATHER'S Nelson's Improved Inhaler.

MATHER'S Oriental Rose Cream.
MATHER'S Poor Man's Plaisters.
MATHER'S "Princess" Feeding Bottle.
MATHER'S Pill Machines.
MATHER'S Perfumes in bottle and bulk.
MATHER'S Rose Cream.
MATHER'S Root and Drug Cutter.
MATHER'S Sponge Bags.
MATHER'S Tincture Presses.
MATHER'S Violet Powder.

TEN PER CENT. DISCOUNT FOR CASH.

SPECIAL QUOTATIONS TO WHOLESALE AND EXPORT BUYERS.

On the 1st of March, 1st of June, 1st September, and 1st of December, is published MATHER'S QUARTERLY PRICES CURRENT, comprising Druggists' Sundries, Medical Glass Ware, Perfumery, Surgical Plaisters, &c., &c. Chemists and Druggists not receiving it in due course are respectfully requested to forward their names and addresses to Publishing Department, FARRINGTON ROAD, LONDON, when they will be placed on the Register for regular transmission.



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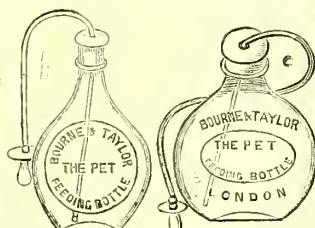
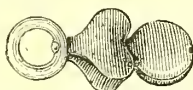
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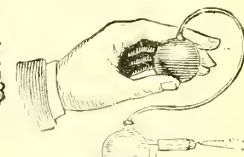
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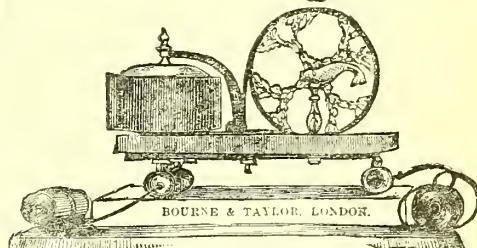
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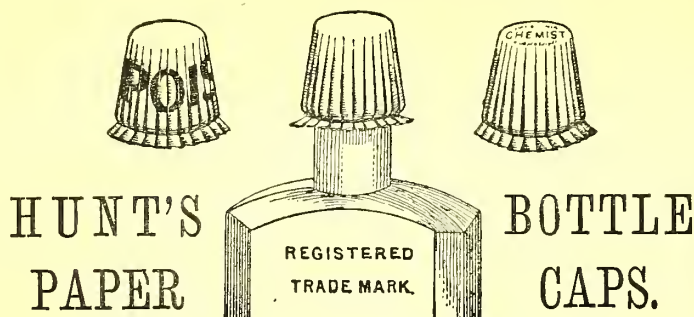
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Made of Superior Strong Papers
By Machinery Patented in England, France, and Germany.

PLEATED IN A STYLE IMPOSSIBLE TO IMITATE BY MANIPULATION.

	PER GROSS BOX.						
	FIRST FIVE SIZES.	No. 39	No. 45	No. 47	No. 48	No. 49	No. 51
White, Red, Blue, Green, Orange, Violet, or Grey	1/6	2/4	2/-	2/8	3/-	3/4	4/-
Crinoline or Printed "Poison," "Lotion," &c.	2/-						

SCALE OF CHARGES FOR STAMPING EITHER OF 5 SMALLER SIZES.

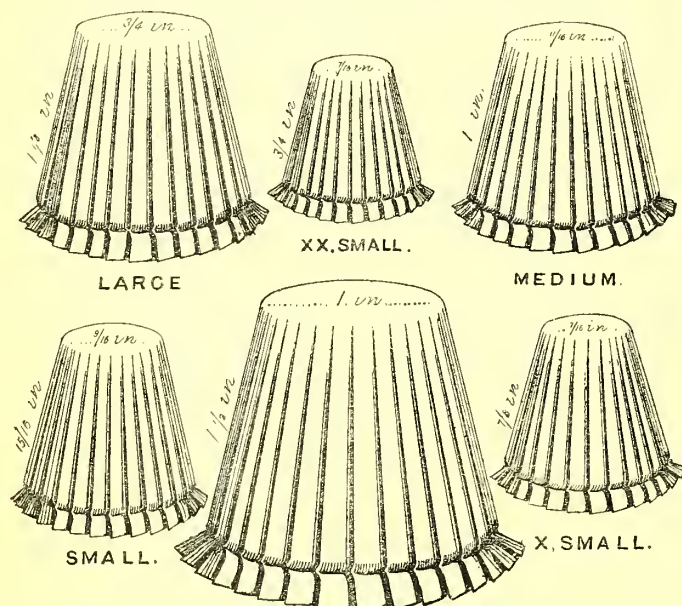
Name and Address, Cameo or Relief Style, including cost of Dies, which will be retained by the Manufacturers.

Gross	3/-	3/4	3/9	4/-	4/3	4/6	4/8	4/9	4/10	Gross.
	1	2	3	4	5	6	7	8	9	

On all first Orders for less than Ten Gross.

For Ten Gross and above, and all subsequent orders for any quantity, 6d. per Gross.

EXACT SIZES AND DIMENSIONS.



No.						Diameter.	Depth.
45.	For	Winchester	Quarts	..	..	1 1/2	1/2
47.	"	Wide-mouth	Bottles or Jars	..	..	1 1/2	1 1/2
48.	"	"	"	"	"	1 1/2	1 1/2
49.	"	"	"	"	"	2	1 1/2
51.	"	"	"	"	"	2 1/2	1 1/2

SOLD BY ALL DRUGGISTS' SUNDRIESMEN.

Manufactory—

3, 4, & 5 LITTLE WINDMILL STREET, LONDON, W.

Those who have not seen these can have no idea of the improvement in the "costume" of a bottle of medicine effected by them. A couple of sizes suffice for all the ordinary medicine bottles, and they can be supplied with the name printed on the centre.—*Chemist and Druggist*, February 15, 1878.

There is perhaps a great deal more in the way in which a bottle of medicine is sent out than is generally supposed. We happen to know a pharmacist who began business in a very small way, but became the leading chemist of the neighbourhood, and who attributed his success in a great measure to the very careful attention given to writing the label, capping the bottle, and folding up and addressing the package. His rule was to use only the best bottles, corks, string, and paper—which he said anyone could form an opinion of—and if these were carefully directed and put up, the inference they would draw from it was, that the contents of the bottle were also carefully prepared; hence confidence was secured, and the business prospered. Such a pharmacist would fully appreciate the neat and convenient Pleated Bottle Caps introduced by Messrs. Hunt & Co., which, as well as doing away with all trimming, give a finish to the bottle, which cannot be compared with the old method.—*Mather's Price Current*, March, 1878.

The neat "capping" of medicine bottles is a point which the pharmacist and dispenser cannot well afford to neglect, and Messrs. W. F. Hunt & Co. have certainly made a successful bid for their suffrages in bringing out some beautifully-made Bottle Caps. These are of the best hand-made paper, and are turned out by machinery, pleated and with rims ready formed for tying round with twine. They are adapted for bottles of all sizes, and when applied have a better and neater appearance than the familiar leather caps, than which they are likewise less porous, while as strong as need be for the purpose. By patronising these little contrivances the dispensing chemist may save both time and trouble.—*British Trade Journal*, April, 1876.

The accuracy of the pleating, beauty of coloring, handsome form, and their generally tidy appearance, together with their low price, will not fail to recommend them to every pharmacist who takes an interest in having his work appear well. Those who put caps on to their bottles at all, will find the use of these a great saving of time and trouble, and the result will be far superior to anything they can turn out by hand.—*New Remedies*, June, 1878.

These Bottle Caps are made of a very strong and non-porous paper, and we think are destined to entirely replace the ordinary method of Capping, Bottles, whether they be of Medicine, Perfumes, or anything else.—*Perfumers' and Hairdressers' Gazette*, May, 1878.

Medicine Bottles are not very cheerful ornaments for the toilet table; but if their presence is necessary, it is certainly desirable that they should be as attractive in appearance as possible. Some such idea must have been present to the mind of W. F. Hunt & Co. when they designed the elegant "Patent Bottle Caps," which are now so rapidly becoming popular with dispensers. These capsules are as easily put on and taken off as one's hat, and one of them is as much an ornament to a nauseous draught as a *chapeau* is to the doctor who prescribes the potion.—*Figaro*, May 17, 1876.

Messrs. SANGER & SONS'

CATALOGUE

OF

PATENT MEDICINES

(PUBLISHED AT MIDSUMMER),

To which is added Druggists' Sundries, Perfumery,
Lozenges, Mineral Waters, and other articles
in general demand in a Chemist's Business

FREE ON RECEIPT OF BUSINESS CARD, FROM

252 Oxford Street, London, W.

N.B.—This is strictly a Business List of 190 closely-printed pages, and not
crowded with advertisements to cover cost of production.

EPILEPTIC FITS.

TAYLOR'S

ANTI-EPILEPTIC MEDICINE.

NOTICE TO CHEMISTS.

Epilepsy being considered incurable by most medical men,
we would call your special attention to this medicine, which has
proved a cure in many cases, and in none failed to give relief.
If, therefore, you know any one in your town who suffers, and
will kindly interest yourself in the matter,

MESSRS. SANGER & SONS,

252 OXFORD STREET, LONDON,

Will forward you a **SAMPLE BOTTLE FREE** to any
London House; and your future recommendations, when you
have proved its efficacy, will be esteemed. A few descriptive
handbills can be sent with it, for your distribution, if desired.

DR. SCOTT'S BILIOUS & LIVER PILLS,

Which have been in use upwards of 70 years, are a medicine
that can be safely recommended by all Medicine Vendors as a
mild and effectual aperient for both sexes. They never cause
griping. They are useful for all Bilious and Liver Complaints,
Indigestion, Wind, Spasms, Foul Breath, Nervous Depression,
Irritability, Lassitude, Loss of Appetite, Dyspepsia, Heartburn,
Sour Eructations, Lowness of Spirits, &c.

Handbills, with Name and Address, can be had, either for counter
use or house to house distribution, on application to the
Proprietors,

MESSRS. W. LAMBERT & CO.,

1a VERE STREET, LONDON, W.

KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

These are universally acknowledged to be the Genuine, and
Druggists may safely recommend them.

CAUTION. The Proprietors of Kearsley's Original Widow Welch's
Female Pills find it incumbent on them to caution the
purchasers of these Pills against various imitations by parties who have
no knowledge of their peculiar preparation, the Original Recipe having
been sold to the late G. Kearsley, of Fleet Street, whose Widow found it
necessary to make an Affidavit, for the protection of her property, in the
year 1798. The Genuine Recipe for Widow Welch's Female
Pills has been prepared by them for more than Seventy Years!
Chemists are particularly requested to remark that, as a testimony of
authenticity, each bill of directions contains an Affidavit, and bears the
signature of "C. KEARSLEY" in writing, also engraved on the Govern-
ment Stamp, and each box is wrapped in WHITE paper.

1,000 Handbills, with Name, and Two Tin Showcards,
Supplied with all Orders for 1 doz. (13) boxes. Price 27s. doz., subject to
10 per cent. for cash.

Special Quotations to Shippers and for Large Quantities,
ON APPLICATION TO

J. SANGER & SONS,

252 OXFORD STREET, LONDON, W.

The special attention of the Trade is called to

BENZINE COLLAS,

Which is acknowledged on all hands to be the most reliable
Preparation for removing Grease, Oil, Tar, Wax, or Paint from
every description of Wearing Apparel or Household Stuff. It
neither injures the Colour or Texture nor leaves any odour or
stain. It is neatly got up, and is a most saleable article.
Observe the word "COLLAS" on label and cap.

1,000 HANDBILLS, with NAME and ADDRESS,

Will be printed for any Chemist who gives an order for

ONE POUND'S WORTH OF BENZINE COLLAS.

AT THE FOLLOWING PRICES, VIZ.:—

6d., 4s.; 1s., 8s.; 1s. 6d., 13s. 6d., subject to discount.

Special Quotations to Shippers and Large Buyers,
ON APPLICATION TO

J. SANGER & SONS,

252 OXFORD STREET, LONDON, W.

MARTIN'S SEWING MACHINE OIL,

For Cleaning and Oiling Sewing Machines,

Prepared expressly for Sewing Machines.

It keeps them in good order and makes them work easy.
Will last longer than any other Oil, and does not dry or corrode.

A little of this upon the working parts will clear away
the clogged oil and dirt caused by using common oils.

ALSO,

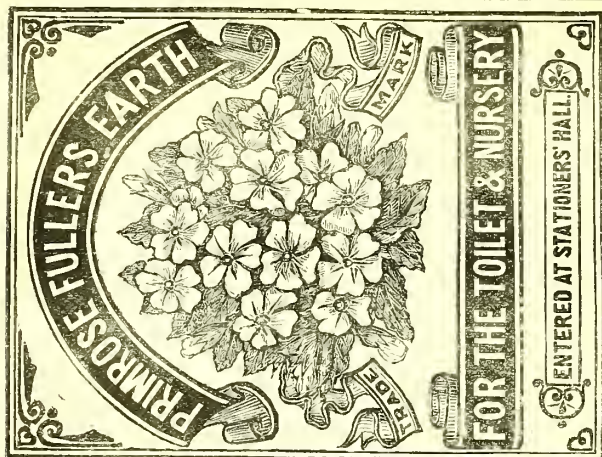
LAMBERT'S BICYCLE OIL,

Equally useful for Bicycles and Light Machinery.

Both are sold in Bottles, 6d. each; wholesale, 4s.
Subject to usual discount.

Special Quotations to Shippers and Large Buyers.

LAMBERT & CO., 1a Vere St., Oxford St., W.



W. WALKER & CO., SOLE PROPRIETORS, JAMES STREET, BETHNAL GREEN, LONDON, E.

This preparation of FULLER'S EARTH is a wholesome and valuable substitute for Violet Powder, Face Powder, Washes, Lotions, and the various substances in common use for eruptions on the face and skin, stripping and excoriation, and is good for all abrasions and roughness of the skin, it being perfectly harmless. It is always a most useful and necessary article in the Nursery, and by superseding the application of the adulterated, corrosive, and poisonous substances in common use, this genuine and perfectly harmless preparation will confer a great benefit on the community.

J. GODFREY, M.D., M.R.C.P.E., F.T.P. & S.E., &c.
Ormonde House, Regent's Park, N.W.

Retail, in Boxes, 1d., 3d., 6d., and 1s. each.
May be obtained through all Wholesale Houses.

WHITE AND SOUND TEETH.

JEWSBURY AND BROWN'S ORIENTAL TOOTH PASTE.



This old-established and increasingly favourite Dentifrice has been Forty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

JEWSBURY and BROWN, CHEMISTS, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address card, and directions for enclosure.

THE UNIVERSAL TOOTHACHE SYRINGE

Retail,
6d. each.



Wholesale,
4s. per dozen.

Is a great improvement upon the "DENTAL SYRINGE," as the fluid is contained in a glass bulb, which enables its contents to be seen, also prevents the liability to evaporation through long keeping or exposure.

THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—Both the above are exempt from Stamp Duty by permission of the Board of Inland Revenue.

"The EMPRESS of INDIA'S BOUQUET"

(Registered under the new Trade Marks Act),

A DELIGHTFUL, REFRESHING, AND FASHIONABLE PERFUME.

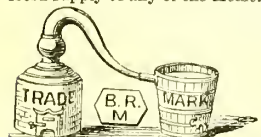
"Chemists may gratify their loyalty to their hearts' content by selling a perfume just introduced by Mr. B. Robinson, of Pendleton, Manchester, called 'The Empress of India's Bouquet.' The perfume is remarkably cheap, and is by no means lacking in richness. The shilling bottles are good sized ones, corked with the patent sprinklers, and decorated with a faithful likeness of the Empress alluded to."—Editor of *The Chemist and Druggist*, November 15th, 1876.

Sold in Bottles, at 1s. each, or Treble Size, 2s. 6d.; Wholesale, 8s. per dozen in 1-dozen cases, and 20s. per dozen in 1/2-dozen cases.

Prepared only by B. ROBINSON, Operative Chemist and Distiller, PENDLETON, MANCHESTER.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopœia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate.

N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopœia.



	Per lb.		Per lb.		Per lb.		Per lb.
Aqua Anethi, Concent.	4/0	Aqua Cinnamon, Ver. Concent.	6/0	Aqua Fœniculi, Concent.	4/0	Aqua Pimentæ, Concent.	4/0
" Anisi, "	4/0	" Cassia "	4/0	" Menth Pip. "	4/0	" Rosæ "	8/6
" Camphoræ "	4/0	" Flor. Aurant. "	8/6	" Ang. Con. "	6/0	" Rosæ Virgin. "	10/6
" Carui "	4/0	" Flor. Sambuci, "	8/6	" Virid. "	4/0		

The above are put up in Bottles of 1lb. or 1lb. and upwards, each of which has the Inventor's Protection Label over cork.

Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Raimes, Liverpool; Mather, Woolley, Manchester; Bewley & Draper, Dublin; Glasgow Apothecaries' Co., Hatrick & Co., Glasgow; Raimes & Co., Edinburgh; Foggett, Thirsk & Goodall & Co., Leeds; Clarke, Blendale & Co., York; McKesson & Robbins, New York. Special terms for large quantities may be had from

B. ROBINSON, Operative Chemist, Distiller and Brewer of British Wines, Manchester.

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WHITAKER & GROSSMITH'S PURE WHITE GLYCERINE SOAP.

Richly perfumed, and guaranteed to contain the necessary quantity of GLYCERINE for effectually imparting to the SKIN the softening and healing properties for which GLYCERINE is so justly famed.

NECESSARY CAUTION.—This unrivalled Toilet Soap was originated by us in 1863, and solely by its superior merit and moderate price has now attained the patronage of a wide circle of all classes of society. As many (external) imitations of our saleable article are often falsely offered as the *real Soap*, all vendors should please note that the Box and Wrappers now bear our "Trade Mark" and not be misled by inferior counterfeits, thereby causing disappointment to purchasers, and consequent injury to the sale of the original and genuine Soap.

1s. 6d. Boxes of Three Tablets, 12s. per Dozen Boxes.

Trade Price Lists sent and Orders executed through Wholesale Houses, or direct from the Manufacturers,

WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore Street, City, London.

H. ERHARDT & CO., 9 BOND COURT, WALBROOK, LONDON, E.C.,

*Manufacturers of Parchment, Skins, White Splits, { For Tying over Jars
and Capping Bottles.*

Vegetable Parchment

Tinfoil & Tinfoil Paper

Also Agents for **CHEMICALLY PURE TINFOIL**, as thin as 90 square feet to the lb.

MIXED & LEAD FOIL & FOIL PAPER. COLOURED CAPPING & FANCY PAPERS.

Samples and Prices post free on application.

G. SALTER & CO., WHOLESALE PERFUMERS,

Red Lion Square, London,

X The best value given in Pomades, Lime Juice and Glycerine, Indian Cream, French Extracts, &c., &c.

Specialitie Triple Extracts, Gilt Sprinklers, or Glass Stoppered Bottle, 1 oz., 12s.; 1½ oz., 17s.

AGENTS FOR

DR. STARTIN'S "MEDELA,"
OR ANTI-SCURF POMADE, 12s. dozen.

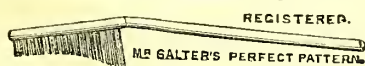
DR. LINCOLN'S HAIR RENEWER,
A NEW PREPARATION FOR RESTORING THE HAIR,
WELL GOT-UP,

In Two Bottles in One Case, 24s. dozen.

TINGO COMA,
THE BEST DYE IN THE MARKET,
20s. dozen.

A Sample Case of well-selected Perfumery, Pomades, &c., sent to any address on receipt of P. Order for 25s.

SOLE PROPRIETORS OF



DIRECT OR THROUGH ALL WHOLESALE HOUSES.

SPONGE.

M. PETERSON & CO., Importers,

66 SOUTH JOHN STREET,

LIVERPOOL.

For Home, Foreign, and Colonial Markets.
Wholesale only.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/6, 1/9, and 3/6; Wholesale, 9/6, 15/6, and 30/ per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the SOLE CONSIGNER, **THOMAS WEST, Chemist, Stretford, Manchester.**

TRY IT!

SPANISH

In Bottles,

Unrivalled for RESTORING HAIR, RENEWING, CLEANSING, THICKENING, and PREVENTING the Hair



IT NEVER FAILS!

WASH!!

2/6 & 5/- each.

from FALLING OFF or Turning Grey, instantly removing all Scurf or Dandruff, leaving the skin pure and healthy.

Of Messrs. Low & Haydon, 330 Strand, London; Barclay & Sons, 45 Farringdon Street, London; of any Chemist or Hairdresser; or of A. P. Muddiman, Leighton Buzzard, Beds.

ESTABLISHED 1840.

R. VARLEY, Importer of Leeches, & Sponge Merchant, 8 BEECH STREET, BARBICAN, LONDON, E.C.

PRICE LIST ON RECEIPT OF BUSINESS CARD.



JOSEPH IZOD,

IMPORTER & WHOLESALE DEALER IN MEERSCHAUM & BRIAR PIPES.

And every Requisite for Tobacconists,

FARRINGDON ROAD, LONDON, E.C.



PHOENIX ESTABLISHED A.D. 1815 **MARKING INK**
GENUINE INDELIBLE

THE LEADING & **STANDARD ARTICLE**

PREPARED ONLY BY THE WIDOW OF THE LATE
JOHN MURPHY
CHEMIST AT THE ORIGINAL ESTABLISHMENT
11, NILE STREET, EAST ROAD, HOXTON, N.

THE ORIGINAL

TRADE MARK.
Estab^d 1815.

NO OTHER ADDRESS - BEWARE OF WORTHLESS IMITATIONS.

RECTIFIED

SPIRITS OF WINE

One Quality only—Finest BRITISH SPIRIT.

Not less than 2 Gallons, 56° o.p., 20/3; 60° o.p., 20/9 per Gallon.

" " 6 " 56° o.p., 19/9; 60° o.p., 20/3 " "

FOR CASH ON DELIVERY ONLY. COUNTRY ORDERS MUST CONTAIN A REMITTANCE.

HENRY BRETT & CO.,

OLD FURNIVAL'S DISTILLERY, 26 & 27 HIGH HOLBORN, LONDON, W.C.

SPIRITUS RECTIFICATUS, P.B.

CHEMICALLY PURE SPIRITS OF WINE.

A highly-rectified English Grain Spirit, free from Fusel Oil.

60 over proof, 20s. 10d. per gallon; 56 over proof, 20s. 4d. per gallon; less 6d. per gallon for five gallons. Lower quotations for quantities. Cash on delivery or with order. Packages charged, and money repaid when empties returned, 2s. 6d. for two gallons; 5s. for five gallons. Country Orders must contain remittance or reference to London House.

JAMES BURROUGH, CALE STREET DISTILLERY, LONDON, S.W.

ALSO DUTY FREE FOR EXPORTATION.

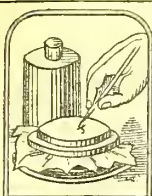
THE BEST SHILLING MARKING INK.

"PETER'S ARGENTUM."

TRADE NOTICE.

R. W. Watson, Chemist, Angel Street, Sheffield, begs to announce that he has purchased the above property. The Wholesale Houses and Shippers are requested to forward all orders direct to the Sole Proprietor.

Usual Terms and Discounts. Counter Bills with Name and Address as Agent on Application.

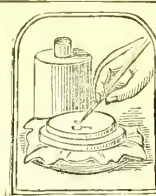


GREAT REDUCTION OF PRICES.

6d. and 1s. PEDESTALS, Glass Cases included.

20 per cent. off £100 Orders.

10 " " " £50 "



CAUTION

I AM DETERMINED TO PREVENT IN ALL CASES EVERY COLOURABLE IMITATION TO PROTECT MY RIGHTS & PROPERTY

WRIT OF INJUNCTION GRANTED NOV. 28, 1877.

COMMON PLEAS DIVISION,
JAN. 15.

(Sittings before Lord Coleridge and
Justices Grove and Denman.)

HICKISSON v. ASHTON.

Defendant moved for a NEW
TRIAL.

Application REFUSED.

This action, which was brought for the alleged infringement of the Plaintiff's Trade Mark, was tried at the last sittings at Guildhall, before Mr. Baron Cleasby, when the verdict was for the Plaintiff with damages.

The PLAINTIFF was the HUSBAND of the DAUGHTER of the late JOHN BOND, the PROPRIETOR of BOND'S CRYSTAL PALACE MARKING INK. The Defendant was a Druggist, and he had sold a Marking Ink manufactured by a Mr. Murphy, and the Plaintiff complained that the Label on Murphy's Ink was an infringement on his Labels. A TRADE MARK is not only a SYMBOL or CHARACTER, but the general appearance of a label, whereby the public would be deceived.

Their Lordships this morning, after consulting Mr. Baron Cleasby on the matter, refused the rule, that learned Judge having expressed his satisfaction with the verdict. — RULE REFUSED. *Full daily papers.*

ANOTHER GOLD MEDAL AWARDED,

PARIS ACADEMIE,

For Merit and Superiority of Finish, 2nd Award.

PRIZE MEDAL, PARIS, 1878, 2ND AWARD.

3 Gold and several Silver and Bronze Medals.
Hon. Mention, Paris, 1878.

PRIZE MEDAL AND GRAND DIPLOMA,
8 Medals.] PHILADELPHIA EXHIBITION, 1876. [7 Diplomas.

PURVEYOR TO THE LORDS COMMISSIONERS OF THE ADMIRALTY.

CAUTION.—The only GOLD Medal Marking Ink. Gold and Silver Medals and Diploma, Silver Medal and Diploma, London. Prize Medal, Lyons, Certificate of Merit, signed Albert Edward, Prince of Wales; and Dublin Diploma, Marking Ink Maker under Royal Warrant to Her Majesty the Queen and Court of Holland.

GOLD MEDAL, SOUTH AFRICA, 1877.

HONOURABLE MENTION and ESPECIAL NOTICE from the FRENCH PRESIDENT and H.R.H. the PRINCE OF WALES, Paris Exhibition, 1878.

HONOURABLE MENTION and DIPLOMA awarded by the JURORS, 1878.

SECOND GOLD MEDAL awarded by the PARIS ACADEMY, 1878, for Merit and Superiority of Production.

J. HICKISSON, Proprietor of the Daughter of the late John Bond's Crystal Palace Marking Ink, 75 Southgate Road, London,

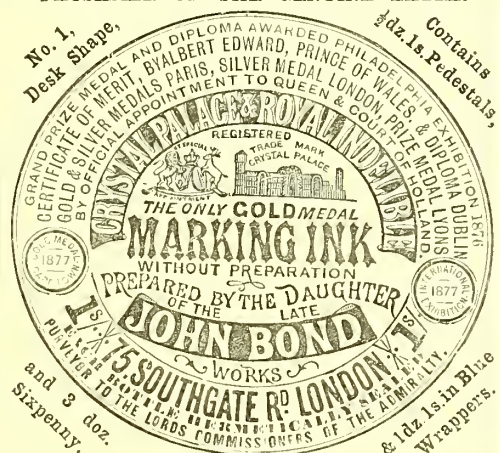
BOND'S MARKING INK.

CAUTION to Wholesale and Retail Vendors.—TAKE NOTICE that on Nov. 26th, 1877, IN AN ACTION "HICKISSON & ANOTHER against MURPHY" JUDGMENT was given for PLAINTIFFS, WITH DAMAGES AND COSTS, AND A PERPETUAL INJUNCTION GRANTED RESTRAINING the said MRS. MURPHY and her AGENTS FROM USING the word "BOND" upon any labels or pedestals manufactured by or for her, OR FROM IN ANY WAY REPRESENTING THE INK MANUFACTURED BY HER TO BE BOND'S MARKING INK.

GRANTED NOV. 26, 1877.

- 6d. Bottles in Round Blue Cases (Grand Show Card enclosed with each Packet of one dozen) ... 30s.
1s. Do. do. do. (Handsome Show Card enclosed with each dozen) ... 60s.
6d. Round Blue Wrapper upon Show Card of one dozen ... 30s.

FACSIMILE OF THE GENUINE LABEL.



Blue Wrappers. Black and White Oval Label.

DEAR HICKISSON,—
Send on receipt the £200 order, as we are much increasing our trade by pushing your Ink in place of useless Novelties, as some other Wholesale Houses are sending other Makers', and thereby the Retail are closing their accounts. The 50 No. 1 Glass Cases are sold. Repeat order immediate.—Yours,
BROWN & CO.

29/4/78.

No Heating Required if allowed to remain three hours previous to Washing.

Where are the Thousand that have expended and One would-be Makers entirely this old-established preparation? to oppose this old-established preparation? Chemists, return all others forced upon you, and do not offend a Customer by sending a would-be substitute.

Have you seen the New Black and Gold Glass Cases with Hinged Black and Gold Framed Linen Specimen of the Crystal Palace with elaborate GOLD Mounts?

No. 2 CASE, containing 3 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, Black and White Oval Label, old style. 16s. each.

No. 3 CASE, containing 1 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, old style, and 2 doz. 6d., do. do. 11s. each.

No. 4 CASE, containing 3 doz. 6d., Crystal Palace and Royal Indelible, Blue Wrappers, Black and White Oval Label, old style. 8s. 6d. each.

CAUTION I WILL PROSECUTE IN EVERY CASE OF MISREPRESENTATION OR COLOURABLE IMITATION



TRADE MARK.

ENEMAS



TRADE MARK.

LYNCH & CO.

Beg respectfully to draw the attention of the Trade to the following

Reduced Prices of their Enemas,

All of which they **WARRANT** to be of **BEST QUALITY** in their respective classes, and Solicit Orders:—

		£	s.	d.
434. HIGGINSON'S	Green, White, or Black India Rubber, with Bone Rectum Pipe, Elastic Gum Vagina Pipe to plug on, and Patent Leather Shield in Slide Cedar Boxes per dozen	1	14	0
434a. DITTO	Ditto, with disconnecting mounts „	1	16	0
437. "FAMILY"	Green, White, or Black India Rubber, with Bone Seat Pipe, Elastic Gum Vagina Pipe and Elastic Gum Child's Rectum Pipe mounted with Bone Shield, all made to fit Screw Mounts, and with Patent Leather Shield in Slide Cedar Boxes per dozen	2	2	0
436. DITTO	Ditto, in Mahogany Boxes „	2	8	0
437b. "PERFECTION"	Green, White, or Black India Rubber, with Bone Seat Pipe, Elastic Gum Vagina Pipe and Elastic Gum Child's Rectum Pipe mounted with Bone Shield, all made to fit Screw Mounts, and with Patent Leather Shields and Disconnecting Mounts, fitted with Thumb Pieces, in Slide Cedar Boxes per dozen	2	8	0
437a. DITTO	Ditto, in Mahogany Boxes „	2	17	0
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FIG. 1.

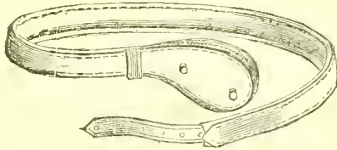


FIG. 4.

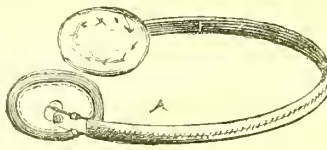
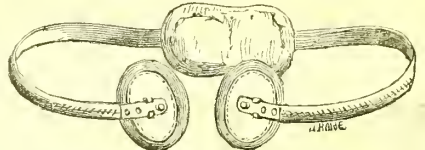


FIG. 5.

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" " " with extending backs	"	2 14 0
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" " " double, Fig. 5	"	3 0 0
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" " double	"	0 13 6
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" " double	"	0 10 6
Scrotal Trusses, basil and chamois or moleskin, single	"	0 4 0
" " " double	"	0 7 0

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Ditto ditto ditto double	"	2 2 0
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" " " double	"	2 8 0
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Ditto ditto ditto double	"	0 7 6
Salmon & Ody's Expired Patent, covered in roan, best polished springs, stitched with silk, single	each	0 4 0

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Moc-Main Lever Trusses, covered in calf or morocco, single	"	0 12 6
" " " double	"	0 17 0
Scrotal Trusses, covered in morocco or calf and doe, single	"	0 10 0
" " " double	"	0 15 0

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" " " Uteri	"	0 18 0

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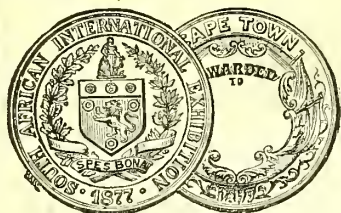


TRADE MARK.

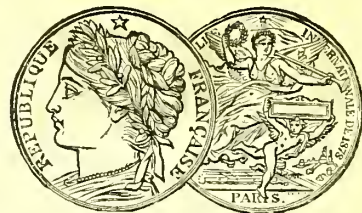
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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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The year has opened with more peaceful prospects than distinguished the début of 1878, and from general reports we understand that there seems a better volume of trade already, especially in respect of export orders.

Pharmaceutically, the month has been mainly occupied with the final scenes of the present Act, in the contest between the apothecaries and the chemists concerning counter practice. The Clerk of the Apothecaries' Society has published a document explaining how that Society was drawn into the action against Mr. Shepperley, and from that, and still more clearly from a subsequent letter which he addressed to the solicitor of the Pharmaceutical Society, and which was read at the recent special meeting of the Society, it seems certain that the appeal in that case will not be pressed further. At any rate, the Society of Apothecaries will withhold their sanction to any further proceedings, and as they are the nominal prosecutors this would seem to be final. But we believe the defence have not yet received formal notice of the abandonment of the case, and

there are perhaps legal means yet available to compel the Apothecaries' Society to continue.

The special meeting of the Pharmaceutical Society, which was called to consider the recent decision of the Council to afford no pecuniary aid to the Trade Association in the defence of this action, was held on January 9. The members present, as well as those who responded to an informal poll, were almost unanimous in condemning the policy of the Council in this matter. A resolution was carried by a large majority to the effect that assistance should be given, but the Council had obtained counsel's opinion, that any such resolution could not have binding effect.

The magistrate of Lambeth has, since the Salford Violet Powder case was reported, tried an almost similar case, and on the evidence of Dr. Bernays, has ruled that starch should be the basis of violet powder. He only mulcted the defendant in costs, as the latter stated that he only kept the packets of mineral violet powder in his window as dummies, and did not usually sell it.

Our obituary this month includes the names of Alfred Bird, of Birmingham; John Wiggan, of Ipswich; and George Robertson, of Edinburgh. We also notice the death of Mr. Powers, the eminent chemical manufacturer, of Philadelphia.

The Board of Trade has determined to legalise the use of a weight of 100 lbs. in so far as to making an Order in Council to provide for verifying and stamping weights of that denomination. The use of the new weight will not be made compulsory.

The Report of the Local Government Board for the year 1877 shows that of 503 samples of drugs analysed 110 were reported adulterated. This is equal to 21·8 per cent. In the Metropolis and Sussex the proportion was 6·9 per cent., and in Lancaster, Stafford, and the West Riding, 35·7 per cent. This extraordinary discrepancy seems to be due to the fact that some analysts regard as adulterated all articles not chemically pure.

An unusually large number of cattle and horses have been poisoned during the past month. A herd of cattle strayed into a plantation and ate yew leaves. Six of them died. Three 2½-year old beasts ate some dressed wheat which had been carelessly thrown in the yard, and all died. A pony has been maliciously poisoned by a boy, who gave it two measures of dressed wheat. A horse has been unintentionally poisoned by its attendant, who at the suggestion of a chemist, gave it butter of antimony to improve its coat. Corrosive sublimate and white vitriol were purchased by this man to be used for similar purposes, and there seem to have been quite a number of breaches of the Pharmacy Act in connection with the cases.

An unfortunate French pharmacist has been fined more than 600 francs for selling some *eau blanche*, or acetate of lead lotion. It was applied externally to a man, who died some days after. The doctors reported that the death was *not* due to the lotion, but the widow brought an action against the pharmacist, which led to the heavy fine just mentioned.

There has been started a rumour that a long-continued drought has injured the chances of the next opium crop. Another suggestion of the enemy, and perhaps a more probable one, is that the Turkish Government is likely to fix an export duty on the drug.

We have to remind Pharmacutists of festive tendencies that the Chemists' ball will be held on Wednesday next, the 22nd inst., at Willis's Rooms. The Secretary for the year is Mr. Arthur L. Savory, 143 New Bond Street. The Chemists' Assistants Society announce a dinner to be held at the Holborn Restaurant on the 29th inst.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

ANOTHER important mineral will form the subject of the next exercise in Qualitative Analysis. It is to be submitted to a systematic examination, so as to detect accidental impurities as well as its essential constituents; the name of the mineral is to be ascertained, and a detailed account of the analysis given.

Students who wish to compete should send us their names and addresses before the 20th inst. Samples of the mineral will be forwarded on the 25th.

Students' reports will be received up to February 15.

IRON PYRITES.

The subject of the last exercise was Iron Pyrites, containing, in addition to its normal constituents—iron and sulphur—arsenic, copper, lead, and the sulphuric radical.

Few who are engaged in any branch of practical chemistry will fail to appreciate the importance of having some knowledge of the history of the substances with which they have to deal. Apart from purely trade considerations, the chemist cannot do without the information that teaches him what impurities or defects are to be expected in the substances with which he operates. From this point of view iron pyrites is a mineral of great interest. It is the source of the greater part of the sulphuric acid of commerce, and sulphuric acid is employed either directly or indirectly in the preparation of almost every chemical substance; indeed, it is said that the quantity of sulphuric acid consumed in a country affords a very fair measure of its commercial importance. We shall, therefore, give a brief outline of the history of this important acid in its relation to the subject of our exercise.

When iron pyrites is heated out of contact with air, part of the sulphur is expelled, and a magnetic sulphide (Fe_3S_4) resembling the magnetic oxide (Fe_3O_4) remains, or if a higher temperature be employed the composition of the residual product nearly resembles that of ferrous sulphide (FeS). When, however, the pyrites is roasted with free access of air, nearly all the sulphur is expelled and oxidised to sulphur dioxide, the residue being for the most part ferric oxide. In the manufacture of sulphuric acid the sulphur dioxide thus obtained is conveyed into leaden chambers with moist air and nitric acid. Here the sulphur undergoes further oxidation, sulphuric acid is produced and condenses on the sides of the leaden chambers. As soon as this "chamber acid," as it is called, has attained a specific gravity of about 1.5 it is drawn off, and in this state it is often used for making artificial manures, nitric acid, and in alkali works; more frequently, however, it is concentrated and sold as oil of vitriol. When the concentration is conducted in leaden pans, as is sometimes the case, and also when the chamber acid is allowed to attain a higher specific gravity than 1.5, the acid is contaminated with lead: this, as the student is well aware, is precipitated when the acid is diluted with water. So much for one volatile constituent of pyrites, sulphur. The mineral, however, seldom consists of pure ferric sulphide, it almost invariably contains arsenic, a considerable portion of which finds its way into the acid, and so it happens that sulphuric acid free from arsenic is commercially rare, for although arsenic is precipitated by sulphuretted hydrogen, it is only by the exercise of more care than is usually bestowed upon technical operations that the impurity is completely removed. The specimen of pyrites which formed the subject of this exercise contained a comparatively large quantity of arsenic, although only one student detected it—a fact that clearly shows how little trouble our contributors have taken to make themselves acquainted with the origin of a frequent and troublesome impurity in sulphuric acid and other chemicals in the preparation of which this acid is employed. The hydrochloric acid of commerce derives from this source a quantity of arsenic sufficient to preclude its use in any of the delicate tests for arsenic, such as Marsh's test. In addition to arsenic the rare elements selenium and thallium

commonly occur in pyrites, though usually in small quantities: the flue and chamber deposits of vitriol works sometimes contain these substances in sufficient quantity to be a source of profit. Our specimen of pyrites did not contain much copper, but the mineral from some districts is so rich in this metal, that it pays well to extract it from the ferruginous residue that remains from the roasting of the pyrites. From this residue gold and silver have also been profitably extracted, and these metals are now included amongst the by-products of the sulphuric acid industry.

PRIZES.

The First Prize for the best analysis of the mineral has been awarded to HENRY SIEBERG, 118 West Street, Glasgow.

The Second Prize has been awarded to R. WRIGHT, Buxton.

Marks Awarded for Analyses.

Henry Sieberg (1st prize)	..	..	..	..	..	85
R. Wright (2nd prize)	..	..	..	..	..	80
B. M. Stockwell	..	..	..	..	..	75
Enitar	..	..	..	..	..	70
Aqua	..	..	..	..	..	60
J. P. Harold	..	..	..	..	..	55
T. G. Nicholson	..	..	..	..	..	50
Chrysophanic	..	..	..	..	..	50
J. F. Croshaw	..	..	..	..	..	50
Excelsior	..	..	..	..	..	50
Pyrites	..	..	..	..	..	50
D. H.	..	..	..	..	..	40
Colonist	..	..	..	..	..	35
Ferrum	..	..	..	..	..	35
T. H. Elvin	..	..	..	..	..	35
B. P. Barn	..	..	..	..	..	25
F. T.	..	..	..	..	..	10
J. B. F.	..	..	..	..	..	10
William Stroud	..	..	..	..	..	5
E. E. Bowden	..	..	..	..	..	5

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

* * All Communications should include the names and addresses of the writers.

H. Sieberg.—You did not describe how you applied Marsh's test. The best way of separating arsenic from such a combination is to fuse a portion of the powder gently, with sodium carbonate and nitrate, treat the mass with water, add sulphuric acid, evaporate until nitric acid is expelled, then add dilute hydrochloric acid, warm, and pass sulphuretted hydrogen for some time.

R. Wright.—It is always better to get rid of nitric acid when possible before passing sulphuretted hydrogen through the solution. In this case the best plan was to evaporate the nitric acid or nitro-hydrochloric acid solution two or three times with hydrochloric acid. A loss of arsenic may take place, but a special examination may be made for this metal.

B. M. Stockwell.—Your evidence of the presence of free sulphur was not very satisfactory; it would of course be necessary to employ a test that would preclude the possibility of combined sulphur being mistaken for free.

Enitar.—The distinction between marcasite and pyrites is mainly crystallographic: the specimen sent you did not exhibit crystalline structure.

J. P. Harold.—If there was no arsenic in the precipitate, which you say consisted only of sulphur, it was because you did not pass the gas through the solution for sufficient time; the liquid, when warmed and shaken well, ought to smell strongly of sulphuretted hydrogen. See remarks to "R. Wright."

Chrysophanic.—You refer to the substance several times as a metal; iron pyrites is not a metal.

D. H.—The entire absence of a precipitate with sulphuretted hydrogen is impossible under the circumstances you describe; long before the gas was in excess there must have been a copious precipitation of sulphur. We can find no trace of your former paper; it must have gone astray in the post.

Ferrum.—Having found the chief constituents of the substance, you surely ought to have been able to ascertain the name of a mineral of which there are upwards of 500,000 tons used annually in the United Kingdom.

Colonist.—See remarks to "Ferrum."

T. H. Elwin.—See remarks to "R. Wright."

B. P. Burn.—You did not observe the sublimate of sulphur when the substance was heated in the dry test tube, possibly because the tube was too large and the heat not sufficiently confined to the powder. A piece of glass tube about the diameter of a common cedar-pencil, closed at one end, answers very well. You ought to make yourself familiar with all the common tube reactions.

F. T.—Your analysis is not bad for a first attempt. You ought to have submitted the mineral to the preliminary examination that you will find described in almost any text-book of analysis. We strongly recommend you to obtain a few specimens of pyrites, and to make careful analyses of the same, as the analysis of this mineral, though rather difficult, affords excellent practice.

William Stroud.—You must have completely mistaken the nature of the exercise.

E. E. Bowden.—Your results illustrate the danger of trusting entirely to the wet method of analysis. A few blow-pipe tests would have given you more information about the mineral in five minutes.

Pharmacalia.

THE SOUTH LONDON SCHOOL OF PHARMACY.

JUST before the old year expired, the South London School of Pharmacy held its anniversary students' dinner. The old and new pupils met together according to their pleasant custom, and a very enjoyable evening was the result. Dr. Muter was in the chair, and spoke words of encouragement and congratulation which never were more appropriate, for the success of the establishment remains undiminished. Dr. Julius Pollock delivered the prizes and certificates to the successful candidates, amongst whom a lady gained honourable distinction. Mr. Baxter, the secretary, was unusually happy in his remarks, while the students themselves gave an operative entertainment, in which both the acting and singing deserved great praise. Competition has not injured the prospects of the institution; it may fairly take its place amongst our recognised centres of education.

THE QUEKETT MICROSCOPICAL CLUB.

It will not be amiss to notice another annual celebration—the Quekett dinner—which festivity was duly honoured a few weeks previously. It was rendered remarkable not only by the excellent character of many of the speeches, but also by the presence of Professor Huxley, in his double capacity of President and guest. The Quekett Microscopical Club, founded in 1865, is one with which our own members, and especially junior pharmacists, should be acquainted. It was established for the purpose of affording to microscopists in and around the metropolis opportunities for meeting and exchanging ideas, without that diffidence and constraint which an amateur naturally feels when discussing scientific subjects in the presence of professional men. Its first president was the late Dr. Lankester; the subscription is limited to 10s. annually, and there is no entrance fee. The club may best be described as a sort of introduction to the Royal Microscopical Society, and instead of being in any way antagonistic to that older association, may become its most efficient helper. Obviously it was desirable to originate some such organisation, wherein experienced microscopists might meet with students of kindred tastes and hold cheerful converse with each other. Such instructive gatherings are now arranged, and are held at stated periods in the library of University College. There the members read papers, exhibit and exchange specimens, discuss points of interest suggested, and compare notes of progress. So rapid has been the increase in numbers, that though at the conclusion of the first year of its existence, the Club could boast of scarcely more than 150 members, during the past twelvemonth a total of nearly 600 has been reached. A fortnightly excursion system has,

during a certain season of the year, gone on without interruption, an example which has been followed by other kindred societies in widely different localities. We can hardly do better than, in this month of January, invite our younger comrades to share in advantages which are thus provided. We need the microscope in the modern practice of pharmacy—its study has become a necessity, and has ceased to be merely an amusement for a leisure hour; and we are confident that if the nature and objects of the Quekett Microscopical Club were better known its ranks would be largely recruited.

* * *

John Quekett was a born microscopist. At the age of sixteen he gave a course of lectures on microscopical science, having drawn his own diagrams and constructed his own microscope. Belonging to the medical profession he became a Licentiate of the Society of Apothecaries, and a Member of the College of Surgeons of London. It was to microscopical pursuits that he gave his chief attention, and he prepared an extensive series of specimens of the elementary tissues of plants and animals, a collection which numbered 2,500 preparations, and was purchased subsequently by the College. In 1844 he was appointed by the council to deliver annually a course of demonstrations on the collection contained in the Hunterian Museum, embracing an explanation of the method and resources of microscopical study. On the retirement of Professor Owen, Mr. Quekett was elected his successor and also Professor of Histology. Of his many books and papers we need say nothing as they are so well known, but the singular life he led, at the top of the Royal College of Surgeons in Lincoln's Inn Fields, is worthy of being recorded. He lived and worked for many years under the skylight. This elevated sanctum became a sort of emporium for all things microscopic. People sent him specimens from all parts of the world. "A nicely-cured head of a dyak from Borneo, strange seaweeds, odd-looking fish, and viscera of foreign gentlemen who had done with them under stress of curious wounds or mysterious diseases, new flowers, undescribed birds, egg-shells, feathers, wood, insects, or butterflies;" and some of these were more or less highly flavoured, as advanced age or imperfect preparation might determine. But particularly he worked so as to gather information respecting the changes effected by disease upon tissues and organisations. No one was more thoroughly familiar with the practical use of the microscope or more skilful in manipulation. His aim was to gather a store of facts, and to furnish a truthful record of the results of his observations.

The Pharmaceutical Council.

ON January 8, 1879, all were present except Messrs. Fairlie, Mackay, and Rimmington.

A long discussion took place as to whether payment for scientific papers read at evening meetings and afterwards published in the journal should be charged against the evening meetings or the journal. Mr. Bottle very properly desired to place on record his opinion that a great deal of time had been wasted in that discussion.

THE SOCIETY V. THE LONDON AND PROVINCIAL SUPPLY ASSOCIATION (LIMITED).

The solicitor had written to explain why this case had not come on for argument earlier. It might now come on any Wednesday or Saturday after January 11.

WEIGHTS AND MEASURES.

Mr. Stephenson, of Edinburgh, had written to say that the inspector there refused to recognise apothecaries' weights; and the Board of Trade had written to ask for a definition

of apothecaries' weights. It was resolved to seek an interview with the Board of Trade, and Mr. Bottle thought there would be some difficulty about the apothecaries' drachm and the avoirdupois drachm. It was a question whether it would not be better to abandon the former and have nothing between the grain and the troy ounce. The President said there would be more danger of errors with large numbers of grains, and Mr. Frazer said he had never known but one prescriber who used grains exclusively.

THE TRADE ASSOCIATION.

Some correspondence was read from the solicitor, in which it appeared he had alluded to some statement in a recent circular issued by the Trade Association to the effect that the Shepperley appeal case might come on after January 11 as a *suppessio veri*. After a number of gentlemen had spoken, acquitting the Trade Association of any unfair intention, Mr. Sandford said he thought it would perhaps be best not to publish any "unpleasant remarks." Mr. Schacht then said that unpleasant remarks should be avoided, if possible, but in public affairs they were sometimes imperatively necessary. He thought it a lamentable thing that a document should have been issued on January 6 containing a statement which had been positively declared untrue on December 24, and it should be protested against. Mr. Woolley asked Mr. Schacht if he had a law suit pending would he be satisfied with a simple dictum such as that which had been published by Mr. Upton.

EXAMINERS' FEES.

On the motion of Mr. Betty, seconded by Mr. Hills, it was unanimously resolved to raise the fees paid to examiners to three guineas per day. It appeared that originally the examiners did the work gratuitously. Afterwards four guineas were divided among them. Then they had a guinea per day each; next they had two guineas per day; but now, as the Society could afford it, and as the duties were very responsible, it was thought right to pay three guineas per day to each examiner. The President pointed out that this would mean an extra expenditure of about 500*l.* a year; and Mr. Schacht remarked that there was often a good deal more discussion over a grant of 10*l.*

THE PHARMACEUTICAL SOCIETY AND THE DEFENCE OF TRADE INTERESTS.

THE theatre of the Pharmaceutical Society was fairly well filled on Thursday, January 9, for which date the special meeting had been called to express the views of the Society in support of, or adverse to, the recent decision of the Council not to vote any sum of money to the Trade Association in aid of the defence of the Shepperley case. The Council had added to the notice conveying the meeting a "counsel's opinion," signed by Sir John Holker, Messrs. Lumley Smith and H. Burton Buckley, to the effect that the Council had sole charge of the funds, and was not subject to the control of the members; and further, that the Council itself had not power to vote money to an irresponsible body for any purpose, though they could apply the Society's funds to protect the interests of the trade. No doubt the publication of this opinion had had a considerable effect in keeping members away from the meeting, and perhaps it would be fair to assume that it especially kept back many who would have supported the Council. It can hardly be supposed that the Council would not command a larger minority than it got on this question. The result of a canvass by post by the Trade Association was, however, very remarkable. Out of 3,721 circulars sent out, 1,533 had been returned; 84 voted for the Council, and 1,449 against them.

There were many unfamiliar faces in the theatre, and many of those present had come from long distances. Clearly there was a strong feeling of dissatisfaction with the conduct of the Council in this matter, and sometimes the expressions

of that feeling were even bitter. Generally, however, the running comments with which almost every speech was accompanied were good humoured; they were entirely one-sided, the few believers in the Council present preserving a judicious silence. The Council filed into the room a quarter of an hour after the time fixed for the commencement of the meeting, and no one offered any apology for this unpunctuality. The absent members were Messrs. Fairlie, Mackay, and Rimmington.

Mr. Bremridge having read the notice convening the meeting and the counsel's opinion, a lively discussion at once arose. Messrs. Urwick and Andrews asked that the "case" submitted to counsel should be read. The President had no objection, but it would take twenty minutes. Mr. Flux, who drew it up, read it after a good deal of discussion had taken place. The "case" was afterwards commented on as being unfair; it had been, it was said, drawn up in the interests of the Council. This does not seem to have been the fact. We discover no unfairness in the statement submitted, though there is, perhaps, an indication that the solicitor in his own mind had no doubt as to the legal question. The mistake seems to have been in the wording of the requisition, and, as we understand the law, it was not competent for the Council to vote money to any other association, but it would be competent for the Council to vote money for a specific object provided such object could be construed as coming within those which the Society is empowered to prosecute.

Mr. Radley, who had taken the initial steps in calling this meeting, proposed a resolution, but he was properly compelled to modify the wording of his motion, so as to make it agree with the object which had been stated as the purpose of the meeting. The solicitor explained that the absent members had a right to expect that nothing would be carried that day which did not come within the professed objects of the meeting. Mr. Radley, however, and the meeting generally, somewhat murmured at being compelled to move a resolution which counsel had declared could have no binding effect.

A seconder had been left to Providence, and one promptly rose in the person of a fluent gentleman from Eastbourne, Mr. J. A. Provost. He had not gone far when he was interrupted by the President asking him if he was a member of the society, as his name could not be found on the calendar. He replied that he was not only a member, but had been local secretary for several years, and was not responsible for the inaccuracy of the calendar. Subsequently his name was found and he was allowed to proceed, but according to a statement published in the *Pharmaceutical Journal* last week he was not a member after all, as he resigned both his local secretaryship and his membership last June.

The motion having been seconded, the President rose, and with an eye to dramatic effect, announced that he had a communication to make which might have some influence. It was a letter from the solicitor to the Apothecaries' Society to the solicitor to the Pharmaceutical Society, saying that he had written to the solicitor for the Medical Defence Association informing them that the Apothecaries' Society objected to the Shepperley case proceeding farther. This communication had very little effect on the meeting, and the cheers were much more hearty a few minutes after when Mr. Barclay read a telegram from the solicitor for the defence announcing that he had not yet received any notice of the action being stopped.

Then the discussion went on, a series of capital speeches being delivered by Mr. Fitch (Hackney), Dr. Symes (Liverpool), Mr. Hampson and Mr. Humpage (London). Messrs. Fitch and Humpage especially are orators of a somewhat

florid style, and cheers were liberally provided as they spoke until Mr. Humpage began to urge an attempt to make terms with the Apothecaries' Society, which caused cries of "No compromise," and much impatience.

Mr. Gostling was the first to upset the harmony of the proceedings. He was not, he said, like some of those generous beings who came long distances, and had spoken only for the sake of their poorer brethren. This was a reference to passages in Mr. Provost's and Dr. Symes' speeches. Counter practice was important to him, and he was perfectly satisfied with the understanding which had been arrived at between Mr. Flux and Mr. Upton. Ironical cheers followed all Mr. Gostling's remarks, and perhaps cut short his oratory. Then followed Mr. Preston, who declared that the "case" submitted to counsel was not a neutral one. Mr. Hudson (Sheffield), Mr. Urwick, who condemned the want of etiquette shown by the solicitors, and asked if the editor of the *Pharmaceutical Journal* was now paid by the Pharmaceutical Society or by the Apothecaries' Society, Mr. Ellinor (Sheffield), Mr. Frazer, Mr. Long, Mr. Carr, Mr. Clarke, Mr. Slipper, and Mr. Pond. Most of these gentlemen discussed the right of chemists to prescribe; which, unfortunately the meeting was less capable of deciding than it was of settling the point actually before it.

Then Mr. Sandford rose and proceeded to defend the Council. His chief argument was that the Trade Association by their defence of Wiggins had injured the trade by preventing the insertion in the Medical Act Amendment Bill last year the clause repealing the penal clauses of the Apothecaries' Act. Their unwise conduct in that case, he said, was the best argument against entrusting them with any of the Society's funds. Mr. Sandford also declared that the trade was not harassed, and he argued that if they would trust to the Apothecaries' and the Pharmaceutical Societies they would have nothing to fear. He expected this meeting would vote against the Council, but he treated the majority with quite a Carlylean contempt; and with an unkind taunt he told the members it was for them to see that their Council represented them. This was not a courteous tone to adopt. The society has over and over again shown that it values highly Mr. Sandford's services. The members may surely be allowed to disagree with him on one point without desiring to lose his aid altogether. Mr. Barclay's reply to Mr. Sandford was by far the best speech of the day. It was courteous, complete, and moderate. The points which Mr. Sandford had seemed to make were blown away, and Mr. Sandford's defeat was evidently recognised by himself, as he tried hard to get a hearing to reply back to Mr. Barclay.

Mr. Schacht put in a plea for a compromise, Mr. Atkins made a speech which was understood both ways, and Mr. Broad asked whether the Council, which was not allowed to vote money to defend its members, could legally vote money to defend itself against its members by getting the opinion of three eminent counsel. The voting was in something like the proportion of ten to one, and on looking at the clock we found that over four hours had slipped away in this unprofitable controversy.

THE special meeting of the Pharmaceutical Society, called in consequence of a requisition signed by upwards of thirty members, in accordance with the bye-laws of the Society, after the Council had refused to vote an "adequate sum" to the Trade Association towards the expenses of the defence of the Shepperley case, was held at the rooms of the Society on Thursday, January 9, at noon. The attendance was very fair, something like 120 members being present.

A Council meeting being held before the special meeting

of the Society, some little delay was occasioned, and the members present began to show signs of impatience; but soon after a quarter-past 12 the President took the chair, and was followed into the room by 17 other members of the Council.

THE PRESIDENT called on the Secretary to read the notice convening the meeting. This notice explained that the object of the meeting was "for the purpose of taking into consideration the advisability of the Society rendering substantial pecuniary aid to the Chemists and Druggists' Trade Association of Great Britain to assist that Association in its efforts to defend the legitimate interests of the trade." It added that, according to the bye-laws, "no business should be brought forward at any special meeting but that for which it had been convened, and of which due notice had been given." To the published notice was added the following counsels' opinion as to the legality of the purpose of the meeting:—

We are of opinion that if a resolution were passed in the terms of the requisition, it would have no legal effect. We think that the management of the Society's funds is vested in the Council, and that in the disposition of them the Council is not subject to the control of the members.

We are farther of opinion that the Council itself could not legally vote a sum of money in the manner indicated in the requisition. It is within the powers of the Council to apply the Society's funds in the protection of the interests of the trade, but we think that any moneys so applied must be applied by the Council, and not by another and an irresponsible body.

We think that the Council should convene a meeting pursuant to the requisition, but that it should at the same time give notice that the control of the Society's funds is vested in the Council, and cannot be controlled by a general meeting; and, further, that it would not be in the power of the Council itself to dispose of the Society's funds in the manner indicated in the requisition.

(Signed)

JOHN HOLKER.

LUMLEY SMITH.

H. BURTON BUCKLEY.

December 18, 1878.

MR. URWICK rose to ask that the case submitted to counsel should be read. The opinion given seemed to be one-sided; at any rate, the meeting would be better capable of judging if the case were read.

MR. F. ANDREWS had given notice of a motion of a similar character to that which Mr. Urwick had made.

THE PRESIDENT said that Mr. Andrew's notice was of no avail at a special meeting. The meeting could have the case read if they wished it. It would occupy about twenty minutes. First, however, he would like to say a few words. He was quite inexperienced in the management of such a meeting as this, and he trusted to the usual good feeling of the members to pardon any deficiencies. But it was most important that they should be careful in the form and order of the proceedings. This was why the advertisement convening the meeting had such a legal-looking character. It had been drawn up by the solicitor. The Society was an important public body, governed by Acts of Parliament, and it was necessary to consider, not only those present, but those absent, as well. He had no doubt the special meeting would manifest the same good feeling and good sentiment which was always shown at the annual meetings.

MR. ANDREWS thought if the case were published that would no doubt be sufficient.

MR. FLUX, in reference to Mr. Urwick's suggestion, remarked that the case had been drawn up by the solicitor to the Society, not by the solicitor to either party.

THE PRESIDENT had read it, and in his view it was a very fair statement.

MR. SLIPPER said that, with all respect to the gentlemen present, he thought it very doubtful whether a legal document which would occupy twenty minutes in reading would be understood by the members present. (Oh, oh.)

THE PRESIDENT said perhaps if he read the last clause, in which the questions put to counsel were contained, that would be sufficient. The rest was merely an explanation of the position of the Society, and of the circumstances.

There was still much clamour for the case to be read.

MR. HAMPSON said he had read the case, and though he was not prepared to pronounce an opinion which would be of any legal value, he thought it had been fairly drawn. He thought the reading would be time misspent, and might get

the meeting into a fog. Motions were then made in different parts of the room for the case to be read, and also for it to be published.

The PRESIDENT declined to put either, on the ground that no other business than that named in the notice of the meeting could be brought forward. The confusion was, however, brought to an end when

Mr. FLUX commenced to read the case. It recited the history of the formation of the Society, and quoted from the charter the objects of its foundation; stated that, by careful management, the Society had accumulated certain funds. (Derisive cheers.) Then proceeded to quote certain lines in the charter which declared that the Council should have sole control and management of the property of the Society, subject to the bye-laws; referred to several of the bye-laws to show that there was nothing in them inconsistent with the proposition, but that, on the contrary, they supported it. Then the resolution moved at the last meeting of the Council by Mr. Hampson was recited, and it was explained that the special meeting had been in consequence legally demanded. The resolution to be proposed at the special meeting was then given, and it was pointed out that if such should be carried the question would arise whether the Council could legally devote the money as it was proposed. The Chemists and Druggists' Trade Association was then described, and for this purpose an account of its formation was quoted from THE CHEMIST AND DRUGGIST of July 15, 1877. The argument which had been raised in reference to the Old Druggists' Fund, which had been handed over to the Society, was then given. The purposes of the Society, as given in the charter, were detailed. According to this the Society was formed for the purpose of advancing chemistry and pharmacy, and promoting a uniform system of education of those who should practise the same; and also for the protection of those who carry on the business of chemists and druggists (loud cheers); and "that it is intended also to provide a fund for the relief of the distressed members and associates of the Society, and of their widows and orphans." The second of these objects was obviously the only one that could be relied on by the advocates of the resolution. In regard to this the Council maintained that they had not abandoned, and did not intend to abandon, the protection of those who carried on the business of chemists and druggists (ironical cheers), and it might be claimed that the Benevolent Fund was a *quasi* residuary legatee of the property of the Society after the other objects had been duly attended to; that the consideration arose whether any meeting, annual or special, could compel the Council to delegate its duties to any other body. On the other hand, it might be argued that though the Pharmaceutical Society was not on all fours with the Chemists and Druggists' Trade Association, yet that in this respect the two bodies had one common object, and that, therefore, the Society might contribute money for a special object which was equally one of its own objects. With respect to the fund which had been handed over to the Society, and which had been especially collected for trade interests, it might be argued that the acceptance of a gift did not necessarily imply an obligation to contribute donations in return. Coming to Shepperley's case, it was pointed out that in the exercise of their discretion the Council had deliberately declined to defend it. The Birmingham Association had voluntarily decided to take it up. It was suggested that the words in the charter which vested the sole control and management of the funds of the Society in the Council might have been inserted in accordance with a custom which entrusted the funds of City companies to the courts of such companies; references were then made to a few cases in which companies had been restrained from spending monies entrusted to them for specific purposes: the recent Sunderland case was cited, in which the Town Council had been required to pay personally the expenses they had incurred in preparing for a reception; a railway company which had been restrained from investing money in steamships, and others. Finally the questions were put to the learned counsel, to which the replies were as printed above.

Mr. SHAW remarked that he had not suggested, as this "case" would seem to imply, that the whole of the Old Druggists' Fund should be devoted to the present object. He had named no definite sum.

Mr. FLUX said that, in stating a legal proposition, he was

entitled to assume that the greater included the less. It was immaterial, for the purposes of the argument, whether the whole or part of the sum was claimed.

Mr. RADLEY rose to move a resolution, but would like to make a few preliminary remarks. He justified the action which he and others had taken, first, in drawing up a requisition for this special meeting, and afterwards in sending out circulars to the members, asking those who would not be present to sign and return a form enclosed expressing either approval or disapproval of the object of the meeting. There had been 3,721 circulars posted, and within 48 hours 1,533 replies had been received. Of these 1,449 were in favour, and 84 were opposed to the course suggested. (Loud applause.) He also read a telegram received from Bath, saying that the feeling there and in Bristol was warmly in favour of the vote. He had himself been actively engaged in the business for upwards of 44 years, and his experience was that the custom of asking questions in reference to the articles sold was so universal that it ought to be considered that chemists had a perfect right to answer such questions, and he believed the Pharmaceutical Society should defend such rights. He did not know Mr. Shepperley, but was concerned only with the points raised in the law courts. If the case should be ultimately lost it would be a crushing defeat for the trade. Mutual concession had been recommended. He had no objection to a truce, but would decline the concession of being tolerated. (Hear, hear.) In voting money towards the defence of this case they would only be doing an act of self-defence, and he could not help thinking that it was still open to doubt, notwithstanding the legal advice, whether the Old Druggists' Fund at least could not be applied to such a purpose. He was quite confident that there was far less disposition in late years among the trade than was formerly the case to infringe on the rights of medical men. This was due to the higher position taken by members of the trade in consequence of higher education, but it was a reason why they should also maintain firmly their proper rights; and they should remember that the public had rights in the matter to be considered (hear, hear), and they would be fighting for these as well as for their own. He therefore moved, "That this meeting requests the Council of the Pharmaceutical Society to assist the Chemists' and Druggists' Trade Association of Great Britain by a pecuniary grant to aid in defraying the expenses incurred in defending the action brought by the Apothecaries Society against Mr. Shepperley, a pharmaceutical chemist."

Mr. FLUX suggested that the resolution should be altered so as to bring it into correspondence with the objects stated as being those for which the meeting had been called.

Mr. RADLEY: I would prefer the resolution to remain as I have worded it.

Mr. FLUX: Then I must advise the President not to receive the motion. It would not be right for any motion to pass which referred to Mr. Shepperley.

Voices: Why?

Mr. FLUX: Because such a motion would be *ultra vires*, as not being the express object for which this meeting is called. Gentlemen must remember that there are many more members absent than are present, and it is our duty to think of them.

Mr. RADLEY: But the motion that you suggest is one on which counsel's opinion has already been taken, and is not favourable.

Mr. FLUX: But you cannot travel outside the requisition to the Council.

After some further discussion it was decided to adopt the words which Mr. Flux had suggested.

Mr. RADLEY said he had not arranged with anyone to second his resolution, as he had thought that he would prefer to leave it to the meeting.

Mr. PROVOST (Eastbourne) would second the resolution, and he should like first of all to thank the gentleman who had just sat down and the others who had acted with him, for what they had done in calling this meeting. He took it that the object of the meeting was to ascertain if the Council, as at present constituted, did really represent the sympathies and feelings of chemists generally. He thought they did not.

The PRESIDENT here interposed and, addressing the speaker, said he was advised that his name did not appear on the list of members.

Mr. PROVOST: Why, I have been local secretary for five or six years.

The calendar was again searched, but unsuccessfully. Mr. Woolley remarked that they had not got the authorised register, though, as the question was whether Mr. Provost was a member of the Society, and not whether he was a registered chemist, the purpose of this remark was not evident. But the register was loudly demanded from all parts of the room. A little later Mr. Provost's name was found in the list of "chemist and druggist" members, which Mr. Bremridge said he had overlooked, and for which error he begged to apologise.

Mr. PROVOST then proceeded with his remarks. He read a letter from the *Pharmaceutical Journal*, signed "T. Martin," and expressed his entire concurrence with the views of the writer. He thought that by the meeting held that day the Council would ascertain which way the wind was blowing. For years past the Council had failed to show that energy which was demanded, and it was time the members spoke out. The members of the Council were men of elevated position, men with first-class dispensing businesses, and men of wealth. They could hardly be expected to feel sympathy for the chemists of poorer localities, or to appreciate their difficulties. He (the speaker) came from a fashionable watering-place, and had himself a pure dispensing business, and was not therefore affected by such a case as this one against Mr. Shepperley. But he felt that something should be done for the sake of the chemists living in poorer neighbourhoods, and it was for their sake that he had come up to this meeting. He urged the Council to take notice of the feeling expressed that day, and he recommended also that more use should be made of local secretaries, for the purpose of ascertaining the feeling of the country.

The PRESIDENT said he had an announcement to make which might influence the discussion. The circular issued by the Chemists' Association stated that the appeal case was entered for hearing, and might come on any time after the 11th inst. He had referred this to Mr. Flux, and Mr. Flux, having communicated with the Clerk to the Apothecaries' Society, had received a letter from that gentleman, who enclosed a copy of one which he had sent to the solicitors of the Nottingham Medical Defence Association, informing them that the Apothecaries' Society would withhold its consent to any further prosecution of the case of Apothecaries' Society v. Shepperley.

Mr. RADLEY said that in consequence of the announcement he would wish to add the words, "if required," to his motion.

Mr. FITCH (Hackney) said that two years ago he had stated that he was not a member of the Birmingham Society, and he should not have joined it if the Society had fulfilled its duty in defending the interests of the trade. He charged the Council with having neglected their duty in not protecting the interests of those who carried on business as chemists and druggists. It was asserted that the Shepperley case was not a test case, but Mr. Day, the counsel for the Apothecaries' Society, had distinctly stated that it was brought as a test case. If the verdict had been in favour of the plaintiffs, he might have been taken before a lower court, before a County Court Judge for instance, and that judge would have been bound by the verdict of the higher court, and would have had no option but to convict. A knowledge of toxicology was required of Major candidates. What was it wanted for? That they might know what to give in cases of accidental poisoning. The speaker then gave a glowing picture of the judge and the jury returning from the trial, and finding, perhaps, that one of their family had been suddenly injured. The doctor was out, and would not return for two hours—would they not avail themselves of the skill of the chemist? And did they expect that his skill and knowledge would come to him in an emergency, but that he was not to be allowed to possess any at any other time? The Pharmaceutical Society was bound to protect the chemists, and if they do not do so they are not acting up to the duty imposed upon them. (Loud applause.)

Mr. BARCLAY said a serious charge had been implied against the Chemists' Trade Association in the remarks of the President. If the case of the Apothecaries' Society v. Shepperley was really dead as had been stated, they as principals ought to have known of it, and it might be

assumed that in the circular which had been issued they had published a statement knowing that it was not true. (The President—No.) Well, such an inference might be drawn. Certainly the principals in the action might be expected to know more about the action than Mr. Flux, who was not engaged in it. The last communication received by the solicitor for the defence contained no intimation that the action would be dropped, but was to the effect that it would not come on till after the Christmas vacation. That was dated December 13.

The PRESIDENT said the letter from Mr. Upton was dated January 8.

Mr. BARCLAY wished that Mr. Flux would have the courtesy to communicate with the solicitor for the defence in any matters relating to the ease in hand. He then read a letter from Mr. Glaisyer, dated January 8, and a telegram from him of that morning, which stated that the agents for the plaintiffs' solicitors had not been instructed to abandon the appeal.

As an indication of the temper of the meeting, it may be stated that this announcement was received with great applause, while the apparently more satisfactory statement which had been made by the President did not seem to give any pleasure.

Dr. SYMES would not endorse all the hard things that had been said about the Council. They had not met to discuss the right of counter practice. The firm with which he was connected was not much called upon to prescribe. Theirs was a purely dispensing business, and it would not be to their interest to prescribe. He did not take any high ground respecting counter practice, but he knew that it was much more necessary in many other parts of the country, and he thought it extremely selfish to see country chemists hunted down by common informers, and to ignore such prosecutions. He knew that members of the medical profession in Liverpool at any rate did not, as a rule, approve of these prosecutions. They did not care a bit about counter practice. If they did wish to put it down they could easily find abundance of money for the prosecutions. They could bring over Cleopatra's needle from Egypt, and yet the Medical Defence Association had to ask the Apothecaries' Society for a donation of 50*l*. He believed the cases in which chemists violated the law by laying themselves open to prescribe were comparatively few. Perhaps the law was against counter practice, but there was assuredly a right by usage. He knew that such a right was recognised in law, for it had been pleaded against himself in one court in a case of adulteration of musk, though he was pleased to say it did not succeed on that occasion. (Laughter.) In cases of necessity it was universally admitted that necessity was above law. But the law did recognise the right of other than medical men to prescribe in at least one case of great importance. The law absolutely demands that every ship shall take on every voyage a medicine chest, and in by far the majority of cases the medicines were to be administered by the captain, who dealt out $\frac{1}{2}$ -drachm or 1-drachm doses of calomel to the sailors. In the room above he had been questioned about ammonia, and besides its chemistry he had been asked as to its dose, and the effects of an overdose. He considered that prescribing was generally a wrong term to apply to counter practice. Prescribing included diagnosis, and generally chemists did not diagnose. The patient did that; he told the chemist what was the matter with him, and asked to have something for it. He should be sorry to go back and feel that nothing had been done. He had a very great respect for the Society, which had done so much in respect to education, examination, and the Benevolent Fund; but between examination and the Benevolent Fund there lay the broad expanse of life, and the Society ought to do something for its members there. He would be sorry to say one word in depreciation of the Benevolent Fund, but he took it that to save a man from the Benevolent Fund was a greater benefit to him than to help him by means of the Benevolent Fund, and to keep chemists from the Benevolent Fund was one of the objects of the meeting. (Applause.) He had no doubt that if there had been a sharply-defined border between the rights of chemists and medical men, the Pharmaceutical Council would have done whatever might have been its duty when a case like the Shepperley case came before them. But there was no such border, and perhaps they

acted rightly in declining in the first place to defend Mr. Shepperley. The Chemists' Trade Association had less to lose, and could more easily take it up. Now they ought to be thankful to that body for having taken it up, and for having brought out a definite border-line, and he saw no reason why the two Societies should not join hands in good fellowship for the common benefit.

Mr. HAMPSON had been somewhat mixed up in the question, and could not remain quite passive. He liked to review such a question as it would present itself to him in his own shop, and he knew, as he had had businesses in various parts of the country, that a certain amount of counter practice was necessary in almost every business. They do it in the West-end as well as in the East-end, though not perhaps in exactly the same way. Chemists would lose their self-respect if they were required to submit to the dictum of the Apothecaries' Society. Probably the present case was closed, and the Pharmaceutical Society, he regretted, would not have had the honour of assisting in the defence. But let it be remembered that we were only dealing with a passing mood of the Apothecaries' Society. The law would remain, and he considered that all the energy of the Society should be directed to the repeal of the 20th section of the Apothecaries Act. If he had the honour of retaining his seat on the Council he hoped to bring this forward, for he regarded it as a monstrous position that a mere trading society like this Apothecaries' Society should have the power of oppressing chemists whenever they pleased. (Cheers.)

Mr. HUMPAGE said the question could not remain as it was. All publications that he had seen on the subject recognised that counter practice could not be altogether avoided. He had had 50 years' experience of the business, and his impression had always been that if a chemist limited himself to his shop he was safe. If he went outside, he was going beyond his rights. There was always, too, the check on the chemist of the coroner, and as the coroner was often a medical man (he did not wish to cast any imputations) his judgment would not perhaps be always favourable. And if an accident happened, and suppose the chemist were not found guilty of manslaughter, was it not a serious injury to him to have his shop pointed to as the one "where Mrs. Jones' baby was killed"? It had been said that the better-class members of the medical profession disapproved of the Shepperley case, and was it to be wondered at? When he first heard of it he asked some questions respecting it, and had been told, "If you knew what we know about the case you would agree with us that the case should not be defended by us." When the case came out in all its simplicity and flimsiness he felt that the case, as presented in the law courts, and that which had come before the Council, must have been perfectly distinct cases. Why did not the Council, when they first saw the report of the case, come forward and say, "We should have defended such a case as that"? (Hear, hear.) What did they do? When our journal came out, what tone did it adopt? Was it friendly? (No.) Was it sympathising? (No.) He was not ashamed to declare that he was a member of the Trade Association. He thought it was a necessary evil, but it had done good work, though it might have made some mistakes, as he believed it had in defending the Wiggins' case. But to come to the practical point—Was it not possible for the gentlemen of the Pharmaceutical Council to go to the gentlemen of the Apothecaries' Society—(No compromise)—not as culprits, but as gentlemen who could discuss such a matter on equal terms, and arrange that we should not trespass on their ground, and they should not poach so much on ours? But he hoped to see a more kindly feeling towards the Trade Association. We must not quarrel among ourselves. He supposed it was right that there was no legal power whereby this money could be voted. But had they tried to find a way? Was there not a circuitous route somewhere? And gentlemen on the other side must not forget what the Council and the Society had done. Look at these rooms. Look at the annual dinner. (Ironical cheers.) The advantages which young men of the present day enjoyed were infinitely greater than those possessed by their predecessors.

The impatience of the meeting now found vent in cries of "Question," and Mr. Humpage sat down.

Mr. GOSLING was glad to find so much good humour in

the meeting, especially considering that they were fighting, not with a substance, but with a shadow. He endorsed the opinion that the Council should protect the interests of the trade, and because he endorsed that opinion he should vote against the motion. The necessity of counter practice was recognised by ourselves, by the Council, and by the Apothecaries' Society, and he considered the result of the correspondence with the latter body, published a few months ago, should be quite sufficient to satisfy every chemist and druggist. (No, no.) Well, he said that he so regarded it. And he was not in that disinterested position which several speakers seemed to enjoy, who were not personally affected by such a case, and who had come long distances from generous motives. He could speak for himself and other members of the Council, with whom he had great pleasure in associating, that they did interest themselves and work hard in all that concerned the trade.

Mr. PRESTON thought the meeting was indebted to the gentlemen who had widened the scope of the resolution as originally proposed. He thought that it was better that it should affirm the desire of the meeting to protect the interests of the trade generally than confine it to any particular case. The Council had shown great interest in education and other matters, no doubt. All would recognise that. But chemists could not live on education alone, and the Council had not shown sufficient energy in defending the legitimate interests of the trade. The brief which had been read to them, he was prepared to say, had been drawn up in the interest of the plaintiff, and not in the interest of the defendant. (Loud cheers.) It had been his privilege, or perhaps he should say, his misfortune, to have been associated with many solicitors, and he knew very well, it was commonly known, that cases can be put to counsel to get an opinion one way or the other, and, as a man of common sense and of some commercial experience, he maintained that the case they had heard was not a neutral one. (Renewed cheers.) Mr. Preston alluded to the subject of adulteration, and said that the Council had neglected its duty in not defending chemists from many of the frivolous charges which had been brought against them by analysts, and had left most of that work for the Trade Association. It might be an ingenious way of putting it, to say that they had no power to vote money to another association, but had they the power to vote money for the payment of Sir Henry James' fee? (Loud cheers.) Where there's a will there's a way.

Mr. HUDSON (Sheffield) said that those who hoped to live on scientific attainments often lost their teeth before they chewed their bread. He had no desire to see the present Council broken up, but he warned them to pay attention to the complaints of country members.

Mr. URWICK said the case of Apothecaries' Society v. Shepperley, although we had been told there was a deal in the background, had turned out so simple that it was a great pity that the Pharmaceutical Society had not shared in the defence. He had urged at the annual meetings that they should always watch such cases by their solicitor being present. Those who had paid money to the Society felt that they had a claim to be protected. He remembered when a young man, how it was represented that he ought to pay his guinea a year, because the Society would protect the interests of the trade. His opinion was of no value, but he was afraid it had been established that the law was against us. If so they should proceed at once to get the 20th section of the Apothecaries Act repealed, if not in any other way, by getting a short Bill introduced. There had never been a better time, and such a Bill might be passed if all would use their influence with their representatives. The Council had injured the chances of such a Bill to a great extent. He referred to the deputation of three gentlemen from the Council who waited on the Duke of Richmond some time back, and who told him (he forgot the words) something to the effect that the trade was not harassed. He compared them to a blind man saying that all was dark on a sunshiny day. Perhaps it was the case that there was no power to vote this money, but it was not difficult to get a legal opinion to that effect. A lawyer had offered him to get one of an opposite character if he liked. He thought that more regard should be shown to legal etiquette than had been manifested by the solicitor of the Society interfering in the case without communicating with the solicitor to the Trade Association. None of the Council

would do such an act in their private capacity, and he hoped a different system would be followed. He would like to ask one more question, and that was whether the copyright of the journal and the payment of Dr. Paul had passed over to the Apothecaries' Society. When it was looked to for advocacy, it was found that it sat in judgment on the trade and found a verdict against it. (Applause.)

Mr. ELINOR had come from Sheffield to express the views of the chemists of that district in favour of the vote. The district was a large one, and included men of all grades, and they claimed fair play. There must necessarily be a good deal of counter practice in such a district, and the chemists felt very warmly on this subject. They had no disrespect to the gentlemen on the Council; they hoped in a few months, when the Conference met there, to show themselves warm in another sense. But they ought to be defended. He was not satisfied with the way the case had been put to counsel, and he was sorry to see so much cold water thrown on the efforts of the Trade Association to defend chemists. He hoped some way would be found in which aid could be given.

Mr. FRAZER said there were many instances of a corporation being legally unable to vote money for a specific object. Quite recently the Town Council of Glasgow wished to vote the sum of 5,000*l.* in aid of the sufferers by the disastrous failure of the City of Glasgow Bank, but though all were unanimous in this desire, they found that they could not legally vote the money. The other Scottish banks were likewise restrained from contributing. So the Council had power only itself to administer its funds.

(A MEMBER: Administer them then.)

Mr. LONG said that the Council had done but little for them. Widows of chemists might not carry on business, but any body of men might do it by merely associating themselves together. What was the Apothecaries' Society? It was a rich society sending paid informers about the country to get up prosecutions against chemists. He should like to know what would have become of the rest of the chemists if the prosecution of Mr. Shepperley had succeeded. (Cheers.)

Mr. CLARK (Hackney) said the Apothecaries' Society desired to take away from chemists and druggists the right which was possessed by every other of Her Majesty's subjects.

Mr. SLIPPER instanced the class of questions asked and often answered in the chemists' shops continually, and said that these could not be avoided, and he did not believe that medical men as a rule objected to the system. If it was not in the power of the Council to vote money, perhaps some of the more wealthy might contribute. (No, no.)

Mr. POND remarked that if the Society refused to make this grant when asked, they would be literally shaking hands with their enemies and turning their backs on their own members. It would be equivalent to saying that we disagree with the verdict which the jury had found in the recent case.

Mr. SANDFORD said he could not allow to pass uncontradicted all that had been said concerning the Council. It was not the case that the Council took no interest in the business affairs of its members. He had taken part in the business of the Council for about the past quarter of a century, and had never found the Council wanting in a desire to promote the interests of the whole trade. It had been called to account in reference to its action in this affair of Mr. Shepperley. They could not publish all the information which had been brought before them, but let them read what the Clerk to the Apothecaries' Society had said as to the evidence which had been put before the Society before the prosecution had been commenced. It was stated in the course of the trial that Mr. Shepperley was known to have carried on a large amount of counter practice. The Council had had all that evidence before them when they decided not to undertake the defence of Mr. Shepperley. Then he would refer to the Wiggins' case, which had been defended by the Trade Association, and which he considered had done great injury to the chemists' interests. (Loud cries of "Question," and much interruption.)

Mr. BARCLAY requested that Mr. Sandford should be heard.

Mr. SANDFORD went on, amid continual clamour, to explain

how, in his opinion, the defence of the Wiggins' case had discredited and damaged chemists' interests. In bringing forward the Medical Act Amendment Bill, the Duke of Richmond had said that it was only intended to protect titles, and he had put in a schedule to the Bill, among other Acts to be repealed, all the penal clauses of the Apothecaries Act, but when the Bill appeared again, after an interval, it was found that the line which would have repealed the 20th section of the Apothecaries Act was erased, and he (Mr. Sandford) believed that this was simply due to the action against Wiggins, which had occurred meanwhile, and showed to what dangerous extent counter prescribing was sometimes carried. He regarded this as sufficient evidence that the conduct of the Trade Association had not been wise, and a good and sufficient reason for not handing over the funds of the Pharmaceutical Society to that Association. Speaking of the Old Druggists' Fund, he said that had been handed over to the Society to be used by the Council in the exercise of their discretion. A gentleman had asked if the Council represented the members. Well, that seemed to him quite a question for the members. He had seen it stated that the Trade Association was not sufficiently represented by the Council. But he was not aware that it was the duty of the Council to represent the Trade Association. Reference had been made to the action, or rather want of action, of the Council in reference to cases of adulteration. The Council had taken extreme trouble to get provisions inserted in the Act which had very largely protected the trade. The Council, however, could not prevent analysts from bringing foolish actions. Mr. Urwick had alluded to a remark made by one of the deputation which waited on the Duke of Richmond, to the effect that the trade had not been harassed. He did not remember who had made that remark, but perhaps it had been himself. He considered the trade had not been harassed. (Interruption.) How many cases of prosecution had been brought forward for counter practice? He only knew of three. There was, first, Nottingham's case, and he had been told by his own solicitor that he had no chance. Then there was Wiggins' case, in which three children had died; and, lastly, there was Shepperley's case. There was also a chemist at Liverpool who had been threatened with proceedings, and he had himself carefully investigated that case, and having found it, as he thought, a perfectly simple case of counter practice, had recommended the chemist to write to the Clerk of the Apothecaries' Society explaining the circumstances. He had done so, and had heard no more of the matter from that day to this. The Council would have defended that case if further steps had been taken. He said that the Apothecaries' Society were discovering the danger of being led into these proceedings by the Medical Defence Association, and in just the same way the Pharmaceutical Society was in danger of being dragged through the dirt by the Trade Association, who tried to instigate them to litigation. Only recently an attempt had been made to prevent the sending of premonitory letters to persons who were infringing the Pharmacy Act, but he hoped that course would not be abandoned. There was very little doubt as to the result of the vote that day, but his happiness was to know that it could have no effect.

Mr. SCHACHT had been trying to find a point to which the differing views might be rallied, and he was grateful to Mr. Humpage for his suggestion, which he might say was similar to the course he had himself recently proposed. No doubt there were difficulties in the way, but it must be remembered that the verdict of the jury in the recent Shepperley case by no means settled the legal point, which was of most importance to chemists. Sir Henry James had obtained a verdict on the facts of the case, and that was all he cared for. Whether anything might ultimately be done to get the objectionable clause removed was another matter, but he was fully convinced that the conference suggested by Mr. Humpage was the only immediate way out of the difficulty.

Mr. ATKINS thought that the ventilating shaft, which the meeting had proved to be, would do a good deal of good. He had not long had a seat at the Council when this question had been raised, and he had had the privilege of moving a resolution that whenever a clear, simple case of counter prescribing came before the Council they should defend it. He could not but feel that they had delegated to another body a work which they should have done themselves. (Loud

cheers.) He expected to bring the house down, but though he knew his views were unpopular, he thought every man should have the courage of his opinions. He had only to add that whenever he was convinced that they had a test case before them, and Mr. Schacht had called attention to an important point, he should with all his energy support the case being defended.

Mr. BARCLAY was glad to have the opportunity of replying to the criticisms made on the Trade Association. They had not often an opportunity of replying to members of the Council, who used their organ, the *Journal*, to good purpose to make charges against them. Mr. Sandford had stated that Shepperley's case was not a fit one to defend, and, in order to show that, he had taken the opinion of the solicitor on the other side. If he had taken instead Mr. Shepperley's own statement, which had been borne out by the trial, he might have had a different opinion. He had a copy of the letter which Mr. Shepperley had written to the Council when he was threatened with an action, and he would read it if the meeting desired it.

A Voice: Yes; show 'em up.

Mr. BARCLAY read the letter, which gave the case much as it proved to be at the trial. Then as to its being a test case. Surely those who brought the action might be supposed to know. Mr. Hatherley, the secretary of the Nottingham Medical Defence Association, in a letter to the *Lancet* had described it as a good test case, "because of its very simplicity." Mr. Day, who had been the leading counsel for the Apothecaries' Society in all the cases they had brought, had introduced it as a test case, and although it had been said that the Apothecaries' Society did not know that the evidence had been obtained by an informer, Mr. Day had said "he was employed by the Apothecaries' Society." A great deal of capital had been made against them in reference to their defence of Wiggins' case. He was very glad that Mr. Sandford had repeated his statements about that case, for it gave him an opportunity of replying to them. He maintained that the trade had gained much advantage by the defence of that case. They had got on record the evidence of the old gentlemen who had been in business before 1815. They had had from Mr. Justice Field the important point that he had put to the jury the question whether the cases treated by Wiggins were within the custom which had been proved, and they had had from the jury the verdict that they found the defendant had acted as an apothecary in taking cases that were dangerous. They had done all they possibly could to ascertain the facts of the case before they resolved to defend it. They had on their books a resolution to defend only simple cases of counter practice. They had had Mr. Wiggins down to Birmingham and cross-examined him. They had taken the great Apothecaries' Company before a judge in chambers to compel them to say with what he was charged, and they who now, through Mr. Upton, pretended to be so anxious to do everything fair let them fight in the dark. Such conduct might be legal, but it was un-English. The Company, too, had chosen to take the case straight into a superior court, and he took it that if that case had been decided there without being defended it would have been a serious thing for the trade. Now Mr. Sandford had made a statement, not for the first time, that through the injudicious action of the Trade Association in defending Wiggins' case, a clause had been taken out of the Medical Act Amendment Bill which would have otherwise appeared in it. This charge had been made not only by Mr. Sandford but in the editorial columns of the journal. What were the facts. It was reported in the *Pharmaceutical Journal* that when the deputation from the Council waited upon the Duke of Richmond after Wiggins' case, the Duke stated that the clause in the first Bill had been inadvertently inserted, and in this he was confirmed by the Parliamentary draughtsman. (Loud cheers.) No one had said that the Council had done nothing in regard to adulteration; every one admitted it had done a good deal. But when it was said that the trade was not harassed he would remind the Council that there was a chemist in Birmingham, others in Cornwall, Sunderland, and Bradford who had been proceeded against, and whose cases were all waiting for the result of the Shepperley case. Besides that, many chemists had already paid penalties. He regretted that this meeting had to be called, but the Council had made it necessary. It was they who were

jeopardising the interests of the trade by sympathising with the Apothecaries' Society and turning a cold shoulder on their own members, though they could not shut their eyes to the fact that the case as it now stood was of the simplest possible character. He hoped they would yet give their support to the case if it went further for their own sakes. No one, not even Mr. Sandford, had the honour and interests of the Society more at heart than he had, and he hoped this meeting would tend to increase its power and usefulness. (Loud cheers.)

Mr. BROAD (Hornsey) wished to ask if the Council had no power to grant money to defend the trade against its enemies, had they a right to spend money to defend themselves against their members as they had done in getting counsel's opinion. (Hear, hear.) He was not an old man who cared nothing about the future. He had to get a livelihood, and he looked to the Society to support him. Public opinion was now running in favour of chemists, and they should take the flood and go in for their interests.

Mr. SANDFORD, on rising, was met by cries of "Spoken" and "Vote." The President said that he wished to explain, but it turned out that he wanted to read something from Mr. Morgan Howard's speech at the Wiggins' trial, who said he thought there was a proposal before Parliament to transfer the penal clauses of the Apothecaries Act to the Medical Act.

Mr. BARCLAY said he preferred to take the explanation of the Duke of Richmond.

The PRESIDENT, having asked Mr. Radley if he wished to reply, said he himself would like to have said a few words if it were not so late. (Go on.) He would refer to the letter from Mr. Shepperley which Mr. Barclay had read.

Mr. HAMPSON thought if the debate was closed it was not advisable to reopen it. He himself should probably feel disposed to reply to what the President might say.

The PRESIDENT said he quite agreed with Mr. Hampson, and therefore he would at once put the resolution to the meeting. There were over a hundred hands held up in its favour. Against it there were about 12 hands shown, most of the Council not voting. The motion was therefore declared to be carried by a large majority, but the President said it was his duty to state that it could have no legal effect.

The Pharmaceutical Society of Ireland.

THE meeting of the Council was held on Wednesday, 1 January 1, 1879. Present:—Charles R. C. Tichborne, LL.D., Ph.D., President; Dr. Aquilla Smith, Vice President; Dr. Collins, Messrs. Bennett (Kingstown), Boileau, Brunker, Hayes, Hodgson, Oldham, Payne (Belfast), Simpson.

Some letters respecting alleged infringements of the Pharmacy Act were referred to the Law Committee.

Read a letter from Mr. James A. Haslett, pharmaceutical chemist, of Christchurch, New Zealand, informing the Council of the proposed formation of a Pharmaceutical Society in that colony, on the plan of those existing in Great Britain and Ireland, and enclosing a copy of the proposed laws and constitution of the new society. Mr. Haslett referred to the necessity of seeking the recognition of the license of the Pharmaceutical Society of Ireland by the New Zealand Society as a qualification for membership. He also asked for copies of the curriculum and rules of both the home societies.

The Registrar was instructed as to the reply to make to the above letter, informing Mr. Haslett that the license of this society is recognised by the Pharmacy Board of Victoria, and also to send him a copy of the Calendar, containing the curriculum and rules of the society.

The President informed the meeting that he had written to the editors of the *Pharmaceutical Journal* and THE CHEMIST AND DRUGGIST respecting the supply of copies of those journals to members of this society, and read the replies which he had received.

The committee appointed to consider the subject of an annual dinner to the members of the society presented their report.

Proposed by Mr. Oldham, seconded by Mr. Payne, and resolved:—

That the report of the Dinner Committee be adopted, and that the Annual Dinner be held in April in each year.

The Education Committee presented their report, which concluded with the following resolutions:—

1. That, considering the financial position of this Society, the Committee is of opinion that it would not be desirable for the Council to undertake the responsibility of a School of Pharmacy at present, however desirable that course might be at a future time.
2. The Committee is of opinion (after having read the letter from the Society's Examiner in Chemistry), that it would be most desirable that a certificate of having attended a practical course in chemistry be required from candidates presenting themselves for their pharmaceutical examination, and that certificates be received from the following schools only, viz.:—Trinity College, Royal College of Surgeons, Carmichael College, and the Queen's Colleges of Belfast, Cork, and Galway.

On the motion of Mr. Simpson, seconded by Mr. Hodgson, the report was amended by adding to the second of the above resolutions, at end—

The Royal College of Science, and such other schools as shall be approved by the Council.

The report was then adopted.

Mr. Holmes being absent, two motions of which he had given notice lapsed.

The following pharmaceutical chemist was elected a member:—George Ferguson, 1 Adelaide Place, Dublin.

Chemists' Assistants' Association.

DURING December two papers were read before this Association. The first, on December 11, was by the President, Mr. O. Wallis, "On the Natural Order Ranunculaceae." This dealt in a very clear and practical manner with the botanical characters, properties, and uses of the plants of the order. Specially mentioned were those plants, official and otherwise, which are used medicinally at the present time. Many well-mounted specimens lent by Mr. Druce, of Northampton, illustrated the paper, in which, and in the discussion which followed, many interesting facts and fancies concerning the plants alluded to were brought to light. Mr. Wallis was awarded a hearty vote of thanks for his paper, being specially complimented on the clearness of the distinctions drawn between the genera.

The second paper, read on December 18, by Mr. A. Sawden, was entitled "Hints on Plaster-spreading." Mr. Sawden explained that any information given in his paper was such as had come under his immediate notice, gave his own experience of the subject, adding many practical suggestions for neatness and quickness. He also brought forward a process which he thought in many cases very convenient, consisting in keeping plasters ready spread on paper, from which shapes could be cut, and then attached to leather by slight warmth, the paper being afterwards removed by moistening with turpentine or ether.

Mr. Gerrard, F.C.S., of University Hospital, then related his experience, and commented on the methods mentioned by Mr. Sawden and those used elsewhere. This opened a long and interesting discussion, after which a vote of thanks was awarded to Mr. Sawden for his paper, and to Mr. Gerrard for his practical remarks.

Metropolitan Reports.

CAMBERWELL.

FIRE.—The premises of Mr. D. W. Smith, chemist, 146 Southampton Street, Camberwell, were damaged on December 24 by a fire which broke out in the adjoining house.

LAMBETH.

SOUTH LONDON SCHOOL OF CHEMISTRY AND PHARMACY.—On December 20 the annual dinner and distribution of prizes to the successful students at this popular school took place in the large hall at the Horns, Kennington. Dr.

Muter, Principal of the School, in the chair, supported by Dr. Pollock, Dr. Silver, Dr. Cox, the Rev. C. B. Harris, Mr. Joseph Ince, &c., with Mr. Baxter in the vice-chair. Dinner over, Dr. Julius Pollock spoke of the importance which the physician attached to the early training of pharmacists, as upon their care and accuracy in after life he had to depend for the compounding of his prescriptions, and to second his efforts in the treatment of disease. He then proceeded to distribute the medals and certificates, accompanying each with a few words of congratulation and encouragement. The following is the list:—Senior Chemistry—Medal, Mr. Pocock; Certificate, Miss Stammwitz. Junior Chemistry—Medal, Mr. Harrison; Certificate, Mr. Newbigin. Botany—Medal, Mr. Lord; Certificate, Mr. Scammel. Materia Medica—Medal, Mr. Newbigin; Certificates, Mr. Lemmon, Mr. Harrison (equal). Practical Pharmacy and Dispensing—Medal: Mr. Lemmon; Certificate, Mr. Lord. Silver Medal of the School for Session 1877-78, Mr. John E. Phillips. A few speeches followed this part of the programme, but the greater part of the evening was occupied in musical and dramatic performances many of which were very cleverly rendered.

ADULTERATED VIOLET POWDER.—Mr. Lund, chemist, of Rosemary Road, Peckham, appeared at the Lambeth Police Court on December 18 to an adjourned summons for having sold "violet powder" in an adulterated condition. Mr. Marsden prosecuted on behalf of the Vestry. Upon the first hearing the analysis of Dr. Bernays showed that the powder purchased by Inspector Sedgley consisted almost entirely of sulphate of lime or plaster of Paris, and was not fitted for the purpose to which it usually is put. Mr. Chance said he was hardly satisfied as to what "violet powder" really should be, but at the adjourned sitting Dr. Bernays pointed out that it had been deemed necessary that such an article should be considered a drug. It was being constantly used as an outward application to children. The best chemists in the kingdom sold a "violet powder" made of pure starch scented by orris root. The object of violet powder being used was to prevent irritation and absorb moisture. The article in question would not answer that purpose, but might possibly be used hundreds of times without injurious effect. The defendant said it was not the powder he sold generally. It was some sent in packets from a firm, and having a showy sort of cover, he had put it in the shop window. The powder he sold as a rule was pure. Dr. Bernays examined some of the latter, and said that was so. The defendant said he first gave the inspector some of this powder, but as he said it was not enough, he gave him the packet from the window. Inspector Sedgley said the defendant remarked, when he knew the powder was to be examined, that he would sooner sell some of his own make, as he knew nothing of the nature of the other. Mr. Chance said the inference would be drawn if the packet was in the window it was for sale. He only, however, called upon defendant to pay 12s. 6d. costs, and advised him not to sell such packets again.

SHOREDITCH.

MONEY LENT.—On January 6, Mr. Pascoe, chemist, Hackney Road, London, endeavoured to recover 2l. money lent for Mr. Busbridge, manager of the Two Brewers, Gun Street, Friars Street. The money had not been repaid, and the defence was that it had been lent on the security of a pawned diamond ring, which security was afterwards objected to. Judgment for plaintiff with costs.

SOUTHWARK.

THEFT BY A CHEMIST'S ASSISTANT.—William Maclean, aged 27, chemist's assistant, was charged at Southwark, on December 16, with stealing a padlock and staple. He was seen to wrench them from the door of premises undergoing repair at No. 112 Lower Marsh, Lambeth, but was followed and captured immediately. There was nothing to support a charge of housebreaking or attempted burglary so the prisoner was sentenced, under the Vagrant Act, to three months hard labour.

STRATFORD.

FIRE.—On December 16 a fire broke out in a chemical shed on the premises of Messrs. B. Iles & Co., naphtha

distillers, Marshgate Lane, Stratford. Messrs. Bell & Black's extensive match factory, among other neighbouring premises, was temporarily endangered, but the fire was extinguished by the local force. A considerable amount of damage was done.

Provincial Reports.

ABERDEEN.

A SCHOOL OF PHARMACY has been inaugurated under the auspices of the Local Chemists' Society. The classes are gratuitous, and have been generously undertaken by Messrs. J. Gordon (of Messrs. J. & J. Urquhart) and Strachan. Mr. Gordon conducts the Chemistry class, while Mr. Strachan takes charge of the Materia Medica and Pharmacy instruction. The introductory lectures on December 17 and 19 were enthusiastically received by large audiences of assistants and apprentices.

BOSTON.

PONY POISONED WITH DRESSED WHEAT.—On December 7, at the Boston Sessions House, David Harradine, a lad of 14, was committed for trial on the charge of administering poison to a pony. The boy said that his master had been "very nasty" with him, so to pay him out he gave the pony two measures full of wheat which had been dressed with sulphate of copper, and which he had been warned not to touch. The animal died.

CAISTOR (LINCOLNSHIRE.)

PROSECUTIONS UNDER THE PETROLEUM ACT.—On December 17 Messrs. G. A. Levick and Charles Winter, chemists, of Caistor, were summoned at Brigg Petty Sessions for infringements of the Petroleum Act. Mr. Levick had about 100 gallons of petroleum in three large metallic cisterns in a shed more than 50 yards from a dwelling-house. He had only a licence for six gallons in an outhouse at his home premises, and one in his shop. Mr. Winter had 38 to 40 gallons in four barrels in a shed 60 yards from the nearest house. Both had relied on the Petroleum Act of 1868, under which it was not necessary to have a licence for petroleum when it was kept at a distance of 50 yards from the nearest inhabited building. The magistrates considered the plea of ignorance futile, and the defendants were each fined 1*l.* and 5*s.* costs, and the petroleum and containing vessels were forfeited. Both gentlemen immediately applied for a licence for 300 gallons each, which was granted.

CHESTER.

CURIOUS SUICIDE.—On December 12 a young lady, employed as a shop assistant at Mr. Carrington's, newsagent, Chester, committed suicide. Going to Mr. Skidmore's, chemist, at nine o'clock, she purchased six pennyworth of vermin-killer, the whole of which she swallowed, and walking home fell on the kitchen floor. Dr. Lapage was sent for, to whom she confessed eating the vermin-killer. She died very soon afterwards. When filling up the poison register she said to Mr. Skidmore, "Do you think I am going to poison myself?" "No," he replied, "or I should give you jalap." "Well," she answered, "when I am going to poison myself I shan't tell you."

GAINSBOROUGH.

BREACH OF THE PHARMACY ACT.—At the Gainsborough Police Court on December 24, Theresa Oxley, of Upton, was summoned for having sold three pennyworth of laudanum to Sergeant Osborn without the bottle having any label on at all. The Bench, thinking the case a serious one, fined the defendant, who keeps a village shop, 2*l.* and costs.

HALIFAX.

HALIFAX AND DISTRICT CHEMISTS' ASSOCIATION.—Last month the members of this association, with a few friends, had their annual dinner at the Old Cock Hotel, Mr. Farr, President, in the chair. After dinner, the usual loyal toasts were drunk with the customary heartiness. The President, in an address full of interest, congratulated the members on

the fact, that though it was just 10 years since their first dinner, only one of their members had passed away. Health and success had been fairly enjoyed by the remainder, and he hoped the same good fortune would attend them in the next 10 years. The library had been a success, but their classes had not been encouraging. Business hours had been somewhat curtailed, and the members had subscribed liberally to the funds of the Trade Association. The President also commented on the Paris Exhibition. Mr. Stott, Sowerby Bridge, proposed "The Mayor and Corporation," and Councillor Ramsden responded. Mr. Barker proposed "The Pharmaceutical Society," saying the happiest days of his life were when studying there, under Dr. Pereira and Professor Redwood. Mr. Dyer responded, and pointed out the benefits the trade enjoyed through the exertions of the Pharmaceutical Society; but recently, he thought, they did not seem to act in harmony with the true interests of chemists—a fault, he attributed, to the excess of scientific members on the Board; that could be remedied next election. Mr. Brook proposed "The Trade Defence Association," and expressed the most hearty concurrence with the proceedings of that body. Mr. Jessop, the local secretary, responded. Councillor Erierley proposed "Kindred Associations," and Councillor Wood responded. Councillor Ramsden proposed "The Halifax and District Chemists' Association," and Mr. W. C. Hebden, the honorary secretary, responded. Mr. Shaw proposed "The New President," which was most cordially received, and Mr. Farr suitably responded.

HULL.

THE CHEMISTS' ASSOCIATION.—This Association held their annual supper at the Cross Keys Hotel on December 11. The company numbered about 30, Mr. J. Oldham (President of the Association) occupied the chair, and Mr. Parsons the vice-chair. Amongst those present were the Sheriff (Mr. R. M. Craven), Dr. Gibson, Mr. Councillor Fryer, and Messrs. Bell, Hammond, Grindell, Beall, Hoyle, Allison, Longley, Walton, &c. After toasting the Queen and the Sheriff, "The Town and Trade of Hull" was given by Mr. E. Allison, who said that there was plenty of trade but no profits. The "Hull Chemists' Association" was proposed by the Sheriff, who remarked on the improvement which had been effected in the education of chemists, and, as a member of the medical profession, expressed his earnest desire that the time would come when the dispensing business would be entirely in the hands of chemists. The President in responding said he too was desirous of seeing that happy time. Among the other toasts were "The Solicitor" (Dr. Rollit), "The Medical Profession," "The Lecturers," "The Chemists and Druggists' Association," and the Pharmaceutical Society." So the poor Society was not only pushed to the bottom of the list, but then had to share a toast, and take the last half too, with its despised but presumptuous rival.

LEITH.

POISONED BY HELLEBORE.—On December 9 a man named Alex. Eddington Mackenzie, residing in Greenside Place, Edinburgh, while working on board the s.s. *Prague*, chewed some hellebore root, a quantity of which, in bags, formed part of the vessel's cargo. He afterwards felt unwell, and on getting to his home in Edinburgh became so dangerously ill that he was removed to the Edinburgh Royal Infirmary. He was attended by Professor Fraser, but died about eight hours after swallowing the poison.

In the Edinburgh Sheriff's Summary Court, on January 6, a man named James McQuire, residing in Leith, was charged with contravening the Medical Act of 1858, by affixing to the door of his house a plate bearing the inscription, "McQuire, M.R.C.D." and "Dr. McQuire, Surgeon," while his name did not appear on the medical register for Scotland. The accused was convicted on the evidence of several witnesses, and he was sentenced to pay a fine of 10*l.*, or be imprisoned for three months.

LINCOLN.

CHRISTMAS BENEVOLENCE.—The Mayor of Lincoln, F. J. Clarke, Esq., at Christmastide gave coal tickets to all widows and spinsters of the city of Lincoln who chose to accept them: more than 2,000 bags of coal were thus distributed. The members of the police force were each pre-

sented by the mayor with 7 lbs. of beef; and knife and fork teas were provided for the poor, on four days early in January, 500 persons being accommodated on each day. The tickets for this acceptable benevolence were distributed by the clergymen and ministers of all denominations.

HORSES POISONED.—On December 12, at Lincoln, John Smith Rear, farm servant, lately in the employ of Messrs. Robinson & Bailey, of Dunston, was charged with administering poisonous drugs or substances to two of his masters' horses. A horse belonging to plaintiffs had died, and witnesses were called who saw defendant mix with the horses' food something from a bottle. After apprehension, defendant made the following statement:—"I have been in Mrs. Bailey's service since six or seven weeks after last May, and I have got on real well with Mrs. Bailey and all of them until this mess turned up. I have been doing their horses and anything they wanted me to do. I wanted the horses to look well, so I thought I would give them something. I went to Rumble's, the chemist, in Lincoln, and asked for some mercury; and he said, 'You had better have something with it.' I said I would have some green copperas. He said, 'You had better have some white copperas; it is the finest thing you can give them: it will make their skins shine and look ever so well.' I asked him how he sold butter of antimony. He said, 'If you have one of these bottles, I can sell you it for a shilling.' I bought one, and paid 1s. for it, and also paid 1s. for the mercury and copperas, and bought a box of pills at the same time. This was about a month ago. I gave Mrs. Bailey's horses between 20 and 30 drops each of the butter of antimony on Tuesday at dinner time, and one of them was took badly in the afternoon, and I went into the house and told Mr. Robinson that it was bad, but I said nothing about the poison. Rumble told me how to use it. He said I was to give them between 20 and 30 drops three times a week. There was a label on the bottle, and before I got out of the shop he told me to take it off, and not let anyone see it. There was another man in the shop at the same time as I was—buying mercury and green copperas. Neither of us took a witness nor signed for the poison. The night before I left Bailey's I gave the bottle of antimony to Mr. Fox's second chap, and also the bit of mercury." After a short consultation defendant was fined the full penalty of 5*l.*, including costs. Major Ellison added that the magistrates wished most strongly to say that chemists who sold the men these stuffs were twenty thousand times the worse offenders.

NEWCASTLE.

NEW YEAR'S CALENDARS.—Messrs. Mawson & Swan, chemists, Newcastle, have issued a *bijou* calendar, having a thermometer mounted in the centre of the sheet. It is upon very thick cardboard, is beautifully printed and illuminated, and, in short, is a most elegant and successful combination of a calendar and thermometer. The idea is both ingenious and effective.

POISONED BY MISTAKE.—On December 23 an inquest was held on the death of Isabella Walters, the wife of a labourer. On the previous night, about 12 o'clock, she had taken a dose of liniment by mistake for cough medicine. The husband went to Dr. Hardcastle, then to Dr. Baliol, then to Dr. Wilson, but all refused to come. He then went to the police station, when Dr. Baumgartner was telegraphed for, and came within twenty minutes after the message was sent. The jury returned a verdict to the effect that deceased died from the effects of poison taken in mistake for a cough mixture.

NEWPORT.

FALSE PRETENCES.—At the Monmouth Quarter Sessions, Walter Williams, aged 16, a negro and a chemist's assistant, was sentenced on January 1 to nine months' hard labour for obtaining a hat on false pretences, and for stealing money from Mr. Sheppard, Castle Inn, Newport. The prisoner comes from Demerara.

NOTTINGHAM.

METHYLATED TINCTURES, FINE FOR POSSESSING.—On December 11 Richard Kent, chemist, Nottingham, was fined 25*l.* for being illegally in possession of certain methylated laudanum and paregoric elixir.

THE DEFENCE OF MR. SHEPPERLEY'S CASE.—At the last meeting of the Nottingham and Notts Chemists' Association a letter was read from the secretary of the Trade Association, acknowledging the handsome donation of 5*l.* 0*s.* 6*d.* from the chemists of Nottingham, towards the funds of the Association.



MR. GEORGE SHEPPERLEY.

SHEFFIELD.

ROBBERY OF SURGICAL INSTRUMENTS.—Agnes Shaw, a widow, was charged at Sheffield on December 23 with stealing 21 surgical knives and 200 surgical scissors, the property of Messrs. W. & H. H. Hutchinson, surgical instrument makers, Matilda Street. It was stated that the total value of the property stolen was 180*l.* She was sentenced to six months' hard labour.

THE PHARMACEUTICAL AND CHEMICAL ASSOCIATION held a meeting on December 11, Mr. W. Ward presiding, when several resolutions were passed in reference to the Shepperley case, a sum of 15*l.* being voted towards the expenses. A vote of disapproval of the decision of the Pharmaceutical Council in reference to this case was moved by Mr. Ellinor, and carried, and a vote of thanks to the six gentlemen who supported the proposal of a grant of money in defence of the Shepperley case was moved by Mr. Hudson, and also carried.

STAFFORD.

BURGLARY AT A CHEMIST'S.—On December 12, at Stafford Borough Court, Thomas Trubshaw and Charles Powell, lads of 14, residing in Sandon Road, were charged with breaking and entering the shop of Messrs. Marson & Son, chemists, of the Common Road, and stealing two bottles of quinine wine, two packets of cocoa, 3 lbs. of candied peel several bottles of essences, &c. The premises are not occupied. On the night of December 7 the suspicions of a neighbour were aroused, and on a police constable entering the shop from the rear he found the two prisoners concealed under a table. They had obtained admission through a window, the glass of which had been removed. The lock fastening the shop door had been broken, apparently by a chisel, found in the possession of one of the lads, and on the counter a number of bottles and packets had been placed ready for removal. The desk had been forced, the woodwork showing the marks of the chisel. When searched, a box of matches, a bundle of keys, and some glycerine bearing the name of the prosecutors were found on Powell. The prisoner Trubshaw had been engaged by Mr. W. Marson the day before as an errand boy. They were both committed for trial to the Quarter Sessions, bail being allowed. The boys were tried at the Staffordshire Quarter Sessions on December 31. Trubshaw was sentenced to 3 days' imprisonment and 12 strokes with the birch. Powell, who seemed to be an incorrigible boy, was sentenced to a month's imprisonment with hard labour, and was ordered to be afterwards sent to a reformatory for five years.

STAMFORD.

CATTLE POISONED BY DRESSED WHEAT.—About the middle of December three 2½-year old beasts were fatally

poisoned by eating some prepared seed-wheat which had been taken from the drill and afterwards thrown carelessly into the yard where the animals were confined. They belonged to Mrs. Michelson, farmer, Great Casterton, and were estimated to be worth 50*l*.

UTTOXETER.

CATTLE POISONED BY EATING YEW.—A number of cattle belonging to Mr. Wint, farmer, of Abbot's Bromley, near Uttoxeter, were poisoned during the first week of December by eating yew-leaves. A pack of hounds had been hunting in the neighbourhood, and the fence of a thick cover had been broken down by some of the followers who were on foot. Thirty of the herd grazing in the adjoining field all got into the cover, which contained a number of yew trees. The beasts ate of these, and when found they all presented the appearance of being poisoned. A veterinary surgeon was called in, but in spite of every effort six of the cattle died the same day. All the others were badly affected. An offer has been made by Lord Bagot to compensate Mr. Wint for his loss.

WOOLWICH.

ROBBERY BY AN ASSISTANT.—On December 15, at Ilford Petty Sessions, Alexander Kirk, 18, was sentenced to six weeks' hard labour for stealing a platinum dish, value 34*s*., from his masters, Messrs. Burt, Bolton & Haywood, analytical chemists, Silvertown, North Woolwich. The defendant had sold the dish to Messrs. Townson & Mercer, chemists, Bishops-gate Street, for its full value.

FORMULÆ OF SECRET MEDICINES.

(Continued.)

The Formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

HAARWUCHS SALBE—**SALVE FOR PROMOTING THE GROWTH OF THE HAIR** (Otto Selle, Zachan, Pomerania).—A mixture of unguentum cereum* with a concentrated solution of cinchona extract, a small quantity of tincture of kino or catechu, and a trace of Peru balsam. 90 grammes, 3*s*. 6*d*.—*Hager*.

SYRISCHES HAARWUCHSWASSER—**SYRIAN WATER FOR THE HAIR.**—A spirituous tincture of some vegetable dye.

HEMORRHOIDAL SALVE (Bell).—Powdered galls, 1; fat, 3.—*Hager*.

HEMORRHOID POWDER (Wolf).—A box containing 6 powders, each weighing 4 grammes, and containing flowers of sulphur, 65 parts; white magnesia, 15 parts; Austrian rhubarb, 10 parts. 3*s*. 6*d*.—*Hager*.

HEMORRHOIDAL WATER (Dr. Ewich).—Anhydrous magnesium chloride, 75 gramme; anhydrous sodium carbonate, 3 grammes; sodium chloride, 6 gramme; and a considerable quantity of free carbon dioxide dissolved in 600 grammes water.—*Hager*.

HÄMORRHOIDENTOD—**DEATH TO HEMORRHOIDS** (Alpenkräuter Liqueur) (Dr. Fritz).—1,000 parts contain: Gamboge, 1 part; aloes, 8 parts; small quantities of rhubarb, gentian, and cinnamon; and 25 per cent. of sugar.—*Hager*.

HAIR DYE (Abt, Vienna).—Three bottles, the first filled with solution of pyrogallic acid, the second with an ammoniacal solution of silver nitrate, and the third with a solution of liver of sulphur.—*Dr. Fr. Inghausen*.

PHYSIOLOGICAL HAIR REGULATOR (Dr. Tebbett's. Manufactured by Tebbett Brothers, Manchester, New Hampshire).—A turbid fluid containing 1.5 per cent. of lead.—*Chandler*.

VEGETABLE SICILIAN HAIR RENEWER (R. P. Hall & Co., Nashua, New Hampshire).—A turbid fluid containing 1.4 per cent. of lead.—*Chandler*.

MARTHA WASHINGTON'S HAIR RESTORATIVE (Simmonds & Co., Fitzwilliam, N.H.).—A turbid fluid containing nearly 2 per cent. of lead.—*Chandler*.

SINGER'S HAIR RESTORATIVE (New York).—A turbid fluid containing more than 3 per cent. of lead as carbonate.—*Chandler*.

PROFESSOR WOOD'S HAIR RESTORATIVE (O. J. Wood & Co., New York).—A turbid fluid containing nearly .65 per cent. of lead.—*Chandler*.

HAIR RESTORER OF AMERICA (Dr. J. J. O'Brien, New York).—A solution containing about .7 per cent. of lead acetate.—*Chandler*.

KNITTEL'S INDIAN HAIR TONIQUE (New York).—A turbid fluid containing about 1.25 per cent. of lead.—*Chandler*.

HAIR VIGOR (J. C. Ayer & Co., Lowell, Massachusetts).—A solution containing about .6 per cent. of lead acetate.—*Chandler*.

HALLOQUIN (Ed. Fiermann, Berlin).—For preventing fur in kettles. In 100 parts it contains 92 of sal ammoniac, some catechu, and a goodly quantity of dirt.—*Gräger*. A later analysis gave sal ammoniac, 65; barium chloride, 17; and catechu, 18.

HAMBURGER MAGENBITTER, known as the Hamburger Magen-drops (Stomach Drops) of Franz Oscar Wundram. The bottle holds 23 grammes of a brown clear fluid. It is a mixture of clove tincture, 10 grammes; bitter stomach drops, 11 grammes; Hofmann's drops, 2 grammes; peppermint oil, 12 drops. 6*d*.—*Hager*.

HAMBURGER THEE—**HAMBURG TEA** (Frese & Co., Hamburg).—Senna, 32; manna, 16; coriander, 8; cream of tartar, 1; all reduced to fine powder. 100 grammes, 1*s*.—*Hager*.

HARDIDADIK (Asiatic Chocolate).—Prepared from cacao, 42; sugar, 180; starch, 112; rice flour, 64; vanilla, 3.—*Cherallier*.

HARLEM OIL.—The ordinary; balsam of sulphur containing turpentine oil. According to Vial, a sample bought in Harlem contained turpentine oil, 4; sulphur, 1; juniper oil, 3. The genuine Harlem oil of Dr. Arnold consists of equal parts juniper wood oil and juniper berry oil. 8 grammes, 6*d*.

GEGEN LEIDEN DER HARNORGANE.—For diseases of the urinary system, as calculus, catarrh, and cramp of the bladder; gravel; weakness, &c. (Made by E. Karig, Berlin.) 24 powders, prepared from sodium sulphite, 10 grammes; common salt, 4 grammes; calcined magnesia, 4 grammes. 3*s*.—*Schädler*.

HATTE'S REMEDY FOR DISEASES OF THE EYE (from North America).—A small tin box, containing 4 grammes of unsalted butter, which has been coloured with red sandal wood and perfumed with a watery infusion of rosemary leaves, to which some rosemary spirit has been added.—*Wittstein*.

HAUSEBALSAM—**HOUSE BALSAM** (Herbst, Augsburg).—Cochineal powder, 2 grammes; melissa spirit, 600 grammes; eau de Cologne, 100 grammes. Macerate for several days and filter. 25 grammes, 8½*d*.—*Frickhinger*.

HEILKRÄUTER EXTRACT—**EXTRACT OF HEALING HERBS** (Morawitz).—For incipient tuberculosis, serious chronic lung and chest diseases, &c. Clarified honey, containing a small admixture of a concentrated filtered extract of dulcamara, poppy-heads, some bitter plant—perhaps buckbean—and ground ivy. 300 grammes, 3*s*.—*Hager*.

HEILMITTEL (Teacher Krätke, Berlin).—Remedy for nervous diseases, cramp of all kinds, and nervous gout. Three small bottles, each containing 6 grammes of fluid; No. 1 is brownish yellow, No. 2 is blue, and No. 3 red. All are tincture of arnica, variously coloured. No. 1 contains also a small quantity of iodine tincture. According to the direction 6, 9, or 12 drops are to be taken inwardly. 3*s*. 3*d*.—*Schädler*.

HEILPLASTER—**HEALING PLASTER** (Lorrain).—A mixture of 60 grammes yellow wax, 30 grammes colophony, 30 grammes olive oil, 15 grammes beef suet, and 15 grammes turpentine. 15 grammes, 4*d*.—*Wittstein*.

* Olive oil, 5 parts; yellow wax, 2 parts; melt, and stir till cold.

HEILSALBE—HEALING SALVE (Stehmann, Potsdam).—A mixture of King's salve (König's salbe) and tar. 15 grammes, 3d.—*Leydolt*.

HEILSTEIN—HEALING STONE (Kallenberg, Klein-Furra by Nordhausen by Satteldruck).—For galls, malanders, &c. Burnt alum in cakes which have been saturated with solution of ferric chloride, and dried. 30 grammes, 6d.—*Hager*.

HEIL- UND WUNDPFLASTER—WOUND AND HEALING PLASTER; BRENNER'S HEILPFLASTER—BRENNER'S HEALING PLASTER (M. Lauer, Nuremberg; now made by Thekla Brenner, Erfurt).—For cholera, toothache, calculus, malignant ulcers, sore breasts, &c. A clear chocolate brown, moderately soft plaster, of litharge, olive oil, camphor, and wax or tallow. An oval willow box containing 15 grammes, 3d.

HEIL- UND WUNDPFLASTER (Mohrental, Saxony) is similar to the above.

HEIL- UND WUNDPFLASTER (Walther, Saxony).—A brown lead plaster, containing camphor and resembling emplastrum fuscum.

HEIL- UND ZUGPFLASTER, GLÖCKNERSCHES—GLOCKNER'S HEALING AND DRAWING PLASTER (Mathilde Ringelhardt, née Glöckner, Leipsic).—For caries, cancer, carbuncle, tetter, salt rheum, hemorrhoids, chilblains, corns, all syphilitic diseases, articular rheumatism, gout, podagre, &c. A mixture, made with the aid of heat, of emplastrum fuscum, 65 parts, with olive oil, 35 parts. An oval wooden box containing 18 grammes, 3d.—*Hager*.

NAMES OF BRITISH MEDICINAL PLANTS.

BY W. G. PIPER, F.L.S.

The Mistleto.—II.

Marentacken (German) and *maarenzaeken* (Dutch) are names sometimes applied to the mistleto. They mean, literally, "spectre's twig." The first half of the name corresponds to the latter half of the word "nightmare." It need hardly be said that neither has any connection with horses, the word "nightmare" meaning simply "night spectre," or "ghost." A twig of mistleto held in the hand was formerly supposed to give the power of seeing ghosts and compelling them to speak. In the Netherlands it is believed that a branch of it hung at the bed's head will prevent the nightmare. Some verses of the poet Lælius, preserved by Apuleius, inform us that the mistleto was essential to the equipment of the would-be magician. We read in the book of "The secrets of Albertus Magnus of the virtues of Herbs, Stones, and certaine beastes," done into English A.D. 1617, that "this herbe, with a certaine other herbe which is named *martegon*—that is, *silphium*, or *laserpitium*, as it is written in the Alman's language [German]—it openeth all lockes, And if the aforesaid things mixed together be put in ye mouth of any man that thinketh anything, if it shall happen it is set on his heart, if not it leapeth back from his hart. If the aforesaid thing be hanged up to a tree with the wing of a swallow, there the birdes shall gather together within the space of five miles. And this last was proued in my time." The latter superstition is said to be still current in France. In some parts of England the mistleto is still believed in as a protection against witchcraft. These facts are sufficient to show that the name *marentacken* is not meaningless, but they do not explain how the name or the ideas arose. This has never been satisfactorily accomplished.

Kinster, *kenster*, *künster*, *genster*, *künst*, and *kinst* are the various forms of a German name which, like most of the names of the mistleto in that language, has been confused with the title of a totally different plant. The name *genster* is also given to the *genista*, or broom, and there seems to be some organic connection between the German and the Latin. The German *kenster* and its other forms are probably related to the Walloon *canista* (Champenais dialect), *hénistai*, *hénistrai*, *hénistai*, *hénistrai*, and *hennésä*

(Ambleve dialect). It is probable, but not certain, that these words have the same origin. They seem to be connected with the Latin and Low Latin *canistellus* and *canistrellus*, "a little basket." "The metaphor is easily understood, for the mistleto looks like a basket of flowers suspended from a branch. The German *künster* may even be the Latin *canister*" (Ch. Grandgagnage, "Vocab. des Noms Wallons," 2nd ed., 1857). Two German names, *kluster* and *kleister*, seem related in idea to *künster*.

Kreuzholz, "wood of the cross," and *heilige kreuzholz*, "wood of the holy cross," are German names corresponding to the *lignum sancti crucis*, said by Minsheu to be an Italian name for the plant, and with the Breton *louzon-ar-groas*.* "In the West of England there is a superstition that the cross was made of mistleto, which until this time had been a fine forest tree, but was condemned henceforth to lead a parasitical existence" (Thistleton Dyer's "English Folk-lore," p. 34). There is no doubt that this legend was invented by Christian missionaries. Reverence for plants and animals is the most difficult form of superstition to eradicate, and the expedient of giving the superstition a fresh direction has been frequently adopted. *Heilighen* or "holy hay," is another German name.

Vogel-weim (in German, *vogel*=bird) means both birdlime and mistleto. *Liga* (Spanish) signifies the mistleto, birdlime, a garter, and a league. Its derivation is self-evident. *Pania* and *paniaje* are Italian names for the plant. *Pania* means also "birdlime," and is evidently connected with *paniecia*, "paste," and *pane*, "bread." *Adabac*, *dabac*, *debach*, and *debkh* (Arabic) are connected with the Hebrew *debkh*, "that which adheres." *Glu* is both provincial and dictionary French, connected with our word glue, and meaning both mistleto and birdlime, and *glutier* is a Norman name for the plant. In Walloon we find the word *verjalle*, which generally means birdlime, but in some dialects is applied to the mistleto. Literally it is *petite verge* or little rod (Grandgagnage). Lined twigs probably form the connecting idea. Birdlime was formerly made from the berries of this plant by crushing them when ripe, carefully separating the pulp from the skins and seeds, and boiling it for some time. It was then laid in a cool place, and, as Dr. William Turner says, "this thing alone getteth goodnes by rottinge." After fermenting a long time it was washed with water to separate the branny particles, and was then ready for use. Turner tells us, "some vse to make the lime by chowyng of the berries in their mouth. . . . Miscell burdelyme hath the powre to drive away, to soften, to draw, to make ripe impostemes, called pinos impostemes, behinde the eares, and other impostemes with like quantitie of rosin and waxe. Wyth frankincense it softeneth old sores and rebellious impostemes. It melteth a swelled milt if it be sodden and layd to with a gete [agate] stone, or the Asian stone." Pliny says it was used as an application to bald heads. Hippocrates, Dioscorides, and Galen recommend it as an external remedy for all swellings, and the first mentions its use in diseases of the spleen. At a very early date it was used for catching small birds, and at the present day large numbers of nightingales are taken by its means.† In Japan monkeys are taken by means of a birdlime prepared from other plants. When once they have soiled their paws with the sticky stuff, they soon cover themselves with it, and become so exhausted in their endeavours to get clean that they are easily taken by hand. In Hindostan tigers are killed in a similar way. The natives cover one side of certain large leaves with a kind of birdlime, and carpet with them several yards of a path known to be haunted by the tiger. When the animal steps on the leaves they of course adhere to his paws. He lifts his foot and rubs it over his head to remove the leaf, and transfers the plaster to his face. By this time his other foot is caught, and he soon becomes so entangled with them that he is unable to see. His roars attract the natives, who watch their opportunity, or wait till his frantic efforts exhaust him, to give him the deathblow. The newspapers in 1877 stated that a thief had stolen two sovereigns from a shop shelf by means of a fishing-rod tipped with birdlime.

* See CHEMIST AND DRUGGIST, December, 1878, p. 529.

† The birdlime at present in use is prepared from holly bark. Frank Buckland states that it takes as much holly as a man can carry on his back to make a small boxful of the lime.

In the Limbourg dialect of Walloon the names *hâmmstai* and *hamustaine* are used. In the Ardennais dialect the latter is contracted to *haustaine*. These words seem to be identical with the Anglo-Saxon *æmistel*, or oak mistletoe. It is often said that the mistletoe of the oak is not the *Viscum album*, but the rarer European parasite *Loranthus Europæus*. The volumes of "Notes and Queries" and other sources record at least ten English oaks on which this plant has at one time or another been found growing by competent observers. M. Dubamel states that he has seen it springing from stones and dead wood. Decandolle in vain endeavoured to make the seed germinate in earth; when squeezed out of their envelopes and fastened by their glutinous pulp to the window pane, they threw out shoots two inches in length, but refused to develop further. Turner says that it sometimes grows at the roots of bushes and trees. In England it is commonest on the apple, but is rarely or never found on the pear. Nearly every native or introduced tree has served as a stock for it.* It is not a native of Ireland, and popular tradition asserts that it will not grow in Devonshire. It was even said that in an orchard, half in Somerset, half in Devon, the apple-trees in Somerset were covered while those in Devon were quite free from the parasite. The explanation given is that Devou in some way offended the Druids, who cursed it, and forbade the mistletoe to grow within its limits.

In Walloon we find also the names *anse-di-pot*, or "pot-handle," which Grandgagnage says "explains itself," and *insitia*, from *insitellum*, a derivative of *insitum*, meaning "a grafted branch."

In the dialect of the Aube (France) we have *blondeau*, *bouchin*, *breton*, and *louvette*. Breton may refer to its worship by the Bretous; *louvette* closely resembles *louvre*, a name in another district for the *Allium vineale*, which is doubtless connected with *loup*, "a wolf." This species of *allium* is known as crow garlic, and in the Aube it is called *Porre-au-loup*. *Muerdago* is a Spanish name for the plant. The names in the Slavonic languages are very much like each other, but we do not know their meaning. Thus the Bohemian is *mělí*, *milii*, *melij*, *gmelj*, or *omeli*; Russian, *omela*; Polish, *jemiola* or *jemiel*; Lithuanian and Lettish, *amalui*, *amalus*, and *ahmalis*. These are strangely like the modern Greek names, *mekos*, or *melias*. The glistening berries are sometimes called by the French *pomme hemorrhoidale*, and the Portuguese call them *pomme hemorrhoidal*. They do not seem to have been ever used as a cure for piles; their resemblance to the disease probably gave them the name. Some of the Celtic names still remain to be mentioned. The commonest and most important is *gwid*, *gwidhel*, or *gryddhel*, literally "the shrub." The root is a fruitful one in Welsh. From meaning simply shrub, it came to be applied to bushy places, to wild places, to wild animals and the rude inhabitants of wild places, and to rudeness and savagery. In another direction it became applied to the worshippers of trees and shrubs, to the Druids, to the marks which distinguished the Druids from the common people, and thus it came to mean knowledge and science. *Heonllys* (Welsh) is from *Ulys*, "a plant," and *heon* a name under which the chief deity was worshipped by the Welsh bards. *Uchelang* means "a lofty thing," *uchelfa* "a high place," *uchellawr* "the most exalted," *uchellang* "having a lofty site," *uchelbydd*, *ychelbyddh* "the lofty shrub," or "the branch of excellent virtues." All these are Welsh names for the plant. We find also *uchelfar*, *uchelfal*, *uchelfel*, *uchelvar*, *ychelvar*, Welsh; and *huel-varr*, *uchel-varr*, *ihuel-varr*, *inhuel-varr*, Breton; meaning (according to the Welsh etymologists) "lofty summit." Corresponding with this in idea is the Walloon name *hautidame*, from *haut*, "high," and *dame*, of unknown meaning. A statement made in the former paper on this plant must be corrected. *Prenawyr* and *aryrbrwn*, Welsh names, mean the "ethereal tree," not the "golden branch," as there stated. *Pren puraur*, another name, means "tree of pure gold." *Holliaeh* or *ol-hiaeh*, Welsh; *wile-iceadh*, or *wile-iceach*, Erse; *wile-ice*,

wileice, *wile-ice*, and *wil-ice*, Gaelic; *ol-hiaeh* and *olliyah*, Breton, are names for this plant. The last means also a nostrum or panacea, and is equally applicable to Holloway's pills. The first means, when an adjective, "perfectly well in health." All are compounded of two words, *wile*, "all," "the whole," and *ice*, "medicine," "healing," "rent," or "payment." Pliny records the fact that the Druids called the mistletoe by a name meaning in their language "all-healing." Some etymologists say that mistletoe itself is derived from *meist heil tan*, the "most healing twig." *Heil aller schäden*, "heal all wounds," is a German title of the plant; and a MS. list by Robert Brown (preserved in the botanical department of the British Museum) records the name "all heal" as a Scotch name.*

Besides these we have the Welsh *glyd* and *ysglouring*, of doubtful authenticity.

One of the Danish names is *vintergrønt*. There is a similar name for the parasite in Swedish, and their meaning is doubtless "winter-green," from the evergreen character of the plant.

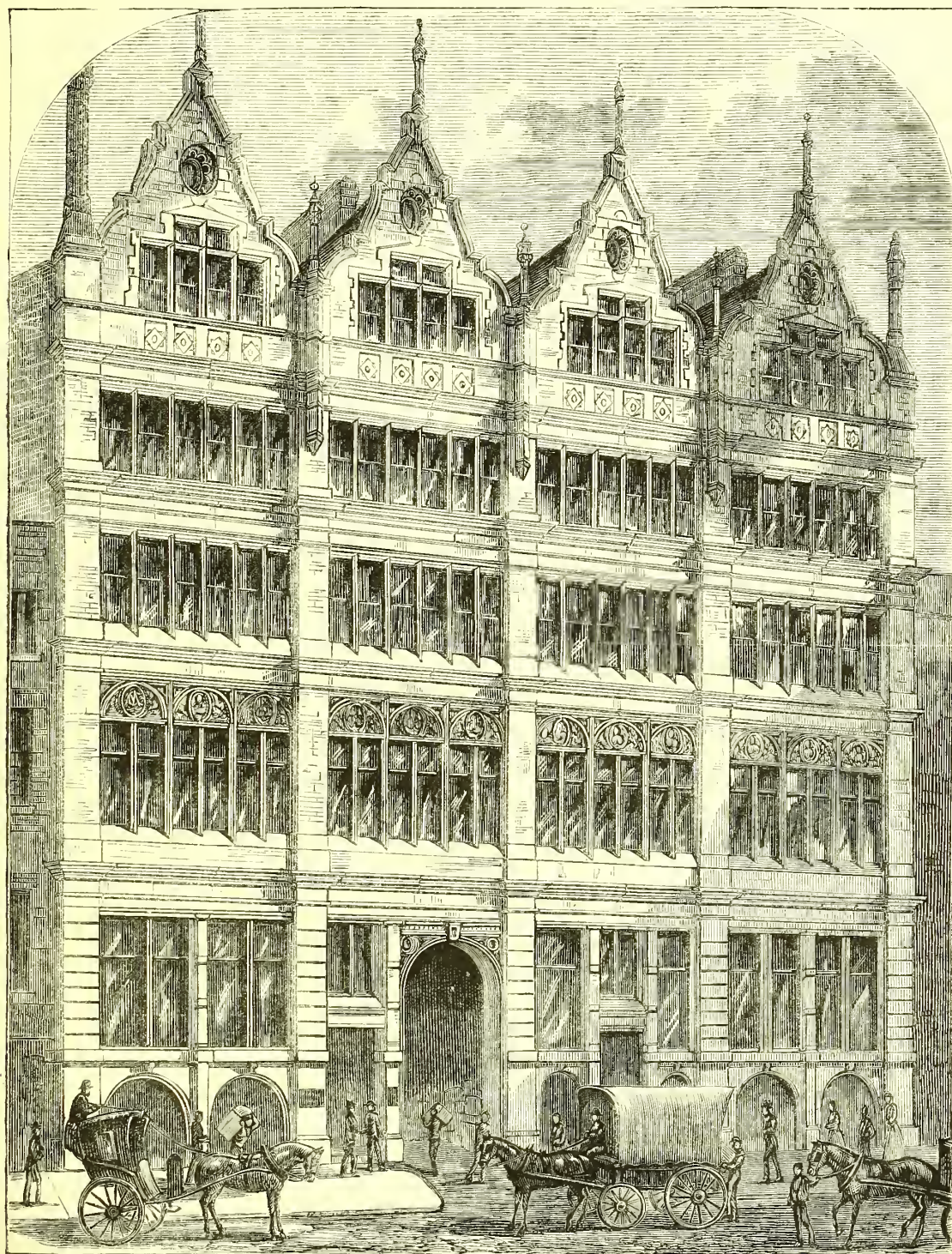
MESSRS. S. MAW, SON & THOMPSON'S NEW PREMISES.

THE enormous wealth of the City of London, and the extensive commerce in which its merchants and traders are engaged, have been more obviously illustrated within the last ten years than in any previous decade or perhaps century. At fabulous cost nests of the old lanes and courts which formerly distinguished the city have been swept away, and broad thoroughfares, flanked by noble and substantial buildings, have taken their place, to the much greater comfort of the many thousands whose business lies within its walls, and to the greater pleasure of those whose visits are more occasional and transitory. Forty years ago it was hardly considered respectable to transact a wholesale business except with gloomy surroundings and in fusty old chambers. Men of princely wealth spent the greater part of their lives in discomforts and amid inconveniences to which struggling beginners are not now called upon to submit. The notion of providing their offices with a tithe of the comforts of their homes never occurred to them, or, if it did, only to be scouted with contempt. But now the tide has set the other way, and one after the other old-fashioned houses are yielding to its influence and are entering heartily into the spirit of the age, which tends, no doubt, towards refinement and beauty.

The firm of Messrs. S. Maw, Son & Thompson has probably more extensive connections with chemists and druggists than any other single house in the world, and the business of this firm has so considerably increased of late years that greater space was absolutely necessary. A new building was commenced some two years ago as a frontage to the old one, and is now about completed both without and within, and the drawing on the opposite page will justify the assertion that this is one of the most attractive business edifices in London. The style is peculiar, and may perhaps be best described as Jacobean, though it is suggestive of an earlier order. It was designed by Mr. H. B. Garling, architect, who also superintended its erection. The adaptation of the space within to the special requirements of such a varied business as that of Messrs. Maw must have required much skill, but the task seems to have been accomplished with the most complete success. The basement, which is well lighted from the street, is employed chiefly for packing, and is divided into two sections, one for home, the other for foreign packages. Here also are the "strong rooms" in which the ledgers are stored every

* Thus it has been found on the hawthorn, black poplar, linden, maple, sycamore, willow, common laurel, medlar, grey poplar, ash, elm, white-beam, blackthorn, rowan, larch, birch, pines of one or more species, yew, beech, hornbeam, sallow, chestnut, quince, cherry, walnut, laburnum, and even on the furze and sweet briar. On the Continent it has been found parasitic on the *Loranthus Europæus*, itself a parasite. When found on the hazel in Germany the peasants expect to find a pot of gold beneath it. It is also found on the olive, almond, acacia, vine, cork, *ilex*, *acerole*, *terebinth*, *orycedrus*, &c. It is said never to prey upon the holly.

* Britten and Holland, *English Plant Names*, I., 11.



NEW PREMISES

ERECTED FOR

MESSRS. S. MAW SON & THOMPSON, ALDERSGATE STREET.

night, a special lift communicating from the counting-house to the doors. The northern entrance from the street leads into the counting-house on the ground-floor, and this department is very suggestive of the extent of Messrs. Maw's business. In the front office, which is fitted up in bank-like style, some dozen ledger-clerks are at work. The cash department is behind, and comfortable arrangements are thoughtfully made for the not usually too pleasant labour of the "collectors" on pay-days, so as to ensure speed in the discharge of some hundreds of accounts. The home and foreign correspondence departments are distinct offices, in both of which a head and several assistants are at work, and, further still, is the post-office for receiving and distributing all the letters and parcels connected with the firm. Messrs. Maw's average daily post numbers not far below a thousand letters, and more than half are orders, or relate to them. These orders, it should be added, are exclusive of the sheets daily forwarded by seven travellers. When the letters have been examined they find their way to a specially-fitted room, where they are kept in order for reference by a clerk in charge. The space behind the ledger and correspondence offices is occupied by the town counter, and the departments for the execution of general orders, both town and country; here also are the invoice clerks—a row of a score—and the usual crowd of customers waiting to be served makes this perhaps the busiest and most crowded portion of the establishment. The surgical instrument department is also on the ground-floor, and is under the experienced superintendence of Mr. Banks. A description of this department alone would abundantly suffice for an article, but it would be rather beyond our immediate scope to do more than allude to the vast variety of cunningly-devised and mercifully-intended weapons with which this store-house is furnished. A large proportion of modern surgical inventions have been perfected in this department, and the practical skill of Mr. Banks is in constant requisition as a supplement to the ingenious ideas both of the able and of the visionary improvers of the chirurgic art. On the first floor are the private offices of Mr. Charles Maw and Mr. John Thompson, the present partners in the firm. The show-room, also on this floor, is the special feature of the new building. It is spacious and excellently lighted, handsomely fitted, and contains samples of almost every description of druggists' sundries. Surgical instruments and sponges are excluded from this assertion, as they have special show-rooms; but, apart from these, we believe that one of every size, shape, colour or style, of all the multitudinous sundries which make up such a stock as Messrs. Maw's, is to be found arranged and ready to hand in this room. The extreme convenience of this arrangement, both for buyers and sellers, need not be remarked upon. On the same floor are the fancy goods departments and glass-rooms, fitted up in the most convenient style, and well worth inspection. On the next floor we come to avenues of shelves, filled with stocks of proprietary articles, perfumery, &c., and the back part is devoted to the work of fitting together the various parts of feeding bottles, boxing, and putting them up ready for sale. This work is done chiefly by females, who receive from a superintendent a gross each of all the parts, and put them together with wonderful rapidity. There are, perhaps, few products for which, in good and bad times, the demand proceeds so steadily as for feeding bottles. Mounting a floor higher we come to the sponge room, which contains a stock of considerable value and of great variety. Another portion of this floor is occupied as a workroom for women employed in covering trusses and deformity instruments, making elastic stockings, bandages, &c., and preparing and repairing

certain of the adjuncts of the surgical instrument department. There is a small lift and speaking-tube communicating from this room to the surgical instrument department on the ground floor. One more staircase brings us to the top of this busy warehouse, and on this final floor we find the most skilled and interesting labour of all. All the delicate operations of cutlery grinding and metal turning are carried on in this department with the aid of steam machinery, as also the manufacture of the higher class instruments, such as aspirators, eye instruments, galvanic apparatus, operation and orthopedic instruments, &c. The firm has another steam factory in Hare Court, Aldersgate Street, which is mainly devoted to brass and pewter work. Brass and steel instruments for surgeons' use require the utmost perfection of fineness, and this can only be acquired by a life-long devotion to the work. Messrs. S. Maw, Son & Thompson with reason pride themselves on the care and skill which they can command, and on the consequent high finish of their instruments. Over 300 assistants are employed in the establishment, and probably quite an equal number should be added of the outdoor workers who are engaged exclusively on Messrs. Maw's account.

It is with much pleasure that we have to congratulate Messrs. S. Maw, Son & Thompson on the continued development of their important business, as evidenced by this new building. To write about prosperity is always a cheerful task for a trade journalist, but it is especially gratifying in the midst of the gloomy and despondent paragraphs which so abundantly surround us just now.

THE MANUFACTURE OF GLASS BOTTLES.

BOTTLES are made of glass and stoneware, of different shapes and sizes, are called by different names, are liable to be broken, and must always be paid for. The juvenile pharmaceutical essayist, if suddenly called upon for a dissertation on bottles, would probably not have many more facts at his disposal, and we are not sure that his elders are much better off. Indeed, we will at once confess that beyond some general idea of the art of glass-making we knew nothing about the manufacture of bottles when we started to visit the works of Messrs. Kilner Brothers, at Conisborough, near Doncaster. It will perhaps be best to give a short account of the firm and the premises they occupy, before describing their manufactures.

The house now known by the title "Kilner Brothers" was founded at Thornhill Lees, near Dewsbury, in the year 1814, by Mr. John Kilner, father of the gentlemen who now conduct the business. It has therefore already attained an age which is almost unusual in this nineteenth century. When Mr. Kilner first commenced bottle-making he employed only one "set." In 1864 fresh premises were secured at Conisborough, five miles from Doncaster. These are situated at a place where the railway approaches the river Don, which is navigable at this point and as far as Sheffield. The works are bounded on one side by the railway, from which sidings run to the doors of the warehouses, and on the other side by the river, which occasionally in former years rose so high as to inconvenience the workmen. It still rises as high as ever, but the works have been raised to a greater degree, so that it can no longer do any damage.

Messrs. Kilner, as far as possible, have made themselves independent of extraneous aid. Railway waggons and vessels of their own bring the raw materials of their manufacture—coals from the collieries, sand from King's Lynn in Norfolk, chalk from London—river and alkali from the chemical works—to the doors of the store-houses. The manufactured bottles, packed loose at Conisborough into the railway waggons, are delivered into the warehouses at King's Cross without once passing through human hands.

At Conisborough and at Thornhill Lees the firm can now

accommodate 80 "sets" of men, but the existing depression has influenced even the trade in glass bottles, and the works are not occupied so fully as they might be under pressure. The singular want of elasticity in the demand for medicine is well illustrated by the fact that for "medicals," or bottles in which medicines are dispensed, the demand neither increases nor diminishes. At Thornhill Lees 11 glass houses have been erected, at Conisborough 7 more, making a total of 18, which, when in full operation, require the aid of 850 hands, including, besides the actual makers of the bottles, the packers, mixers, clerks, smiths, joiners, coopers, crate-makers, and mechanics. On the land of the firm (16 acres—7 at Conisborough and 9 at Thornhill Lees) 66 houses have been erected for the employes, besides one for the managing partner. These provide accommodation for as many men as wish to have it.

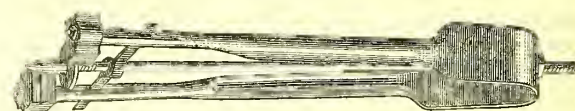
The manufacture of bottle-glass does not differ materially from that of other kinds. Space forbids us to say more about it here than that we saw in operation every important improvement which has been made during recent years, including the Frisby feeder and the Siemens gas-furnace. Among other things the melting-pots are made on the premises. Some of them are like huge flower-pots, others are hooded, and others again are a combination of the two forms. They are made of fire-clay mixed with old pots ground to powder, and the whole is tempered till the mass is as tough as putty. The pots are about 4 feet high, their walls are 3 inches thick, and they will hold about 26 cwt. of melted glass. They are built up in layers like a concrete wall, and it takes a man a week to finish off a single one. Two or three are under manipulation at one time, and they are worked at alternately. When completed they are kept in heated rooms for *ten months*, in order to dry them, and in winter their abode is carefully protected from the frost by padded shutters. The pots are worth about 6*l.* each when finished.

Bottles are made by a "set" of hands, which may consist of either four or five. "Medicals" require four, whisky and other bottles five, manipulations. The glass being ready melted either in the pots or tanks, the "gatherer" collects on the end of a long iron tube, called the blowpipe, a quantity of glass which he considers sufficient for the purpose. This operation requires much practice, as the internal capacity of the finished bottle depends on the proper amount of glass being collected at the outset. The "blower" then takes the blowpipe with the attached glass, blows through it a moment, trundles it on a smooth sloping iron or stone slab, which gives the embryo bottle a conical shape. He then walks to the side of the glass house, puts the glass into a hole, pulls an iron rod with a jerk, and puffs vigorously through his pipe. There is another mysterious jerk, and the bottle emerges already shaped. The hole contained the mould, which is divided longitudinally and hinged at the base. The first jerk shuts the glass into the mould, the puff of breath blows it into the required shape, and the second jerk releases it. The mould cools the glass sufficiently to take away its plasticity. The blower now has a shaped bottle on the end of his pipe. If it is a small one, such as a "medial," he taps his pipe on the edge of a sort of tray, and the bottle drops off. If it is large, like a whisky bottle, he hands it to a little boy called the "wetter-off." This young man dips an iron edge in water, rolls the pipe on the edge of a tray, and runs the wet iron round the neck of the bottle, which incontinently drops off. At present the bottle has no lip. The mouth of the neck is either a little contracted, or has sharp-cutting edges like those of penny bottles of ink. Our readers have probably noticed that all bottles are larger at the shoulder than at the bottom, that they gradually taper downwards. This is most easily seen in whisky bottles or in large vials. If you try to set half-a-dozen of these close together in a line you will soon discover this peculiarity. There is a reason for this as for so many other unconsidered trifles. When the lipless bottle is dropped into the tray the bottom points towards another workman called the "maker." His is the most difficult task, and he earns the highest wages of the "set." He wields the instrument called the puntil, which is something like a long unjointed arm and hand of iron, the hand possessing only four fingers. This is pushed over the bottle. What should be the palm is just the size of the bottom of the bottle. The fingers are at such distance from each other that they just fit the sides, and of such length

that they reach just to the shoulder, the gradual tapering of the bottle giving them a secure hold. The maker then thrusts the bottle through a hole in the wall of the furnace. The neck is of course the most exposed part, and this soon becomes hot and plastic. The bottle is then withdrawn, and the maker takes another tool called the "shears." This is



THE PUNTIL.



THE SHEARS.

composed of three parts; a central tongue, which is just as broad as the throat is to be, and two blades, not shaped like scissor-blades, but exactly corresponding to a longitudinal section of the neck. The tongue is thrust into the neck of the bottle, the blades are brought close, the long arm holding the bottle is rapidly rotated, using the tongue of the shears as an axis, and the softened glass is rapidly converted into a neat lip. The maker slips the bottle into another tray, and a little boy, called the "taker-in," pushes the end of a long iron rod into it, lifts it in a wide curve through the air, and puts it through a hole into a gloomy glowing place called the annealing-oven, which is kept at a temperature a little below the melting-point of glass, till it is stacked full of bottles, and is then allowed to cool gradually during two or three days. It is only right to say that the process is rapid, for an ordinary workman, in an ordinary day of 10 hours, will turn out 130 dozen of finished bottles. One man to whom we spoke told us with pardonable pride that he and another had made 197 dozen in 10 hours, this immense number representing, not the actual number of bottles made, but the number of perfect ones taken from the annealing-oven. The same man, on another occasion, working for 13 hours, made 205 dozen bottles, "the most," he said, "that was ever made in Yorkshire." Very few men are able to turn out such an immense day's work; but thirty years ago a member of the present firm made 267 dozen in one day! This is so long ago that it has probably been forgotten by the men.

This naturally leads to the question, How many bottles does the firm turn out in the course of the year? At the Conisborough works, which are smaller than those at Thornhill Lees, 565,000 *dozens* are made in the course of the year, while the two establishments turn out more than a quarter of a million bottles a week. One is tempted to ask where they all go. The question was partly answered while we were there. Eleven truck-loads were starting for Ireland, a large number for South Africa, several truck-loads for London, and smaller quantities for distribution in other parts. Bottles are sent by Messrs. Kilner Brothers to America, but at present the American makers have not ventured to show themselves in the English market. The competition most felt at present is that of the continental makers. Asia and Australia are both large customers for the wares of this firm, and a few of their bottles go even to the continent.

We were rather surprised to find that the aerated-water trade consumed a larger number of bottles than any other. Bottles with patent stoppers, although so convenient, are dearer, and for some time at least the older form is not likely to be replaced. Some of our readers may have been puzzled to know how the patent stopper gets inside the bottle. In all cases in which india-rubber or similar materials are used as adjuncts, the stopper is of such a size that it may be dropped through the mouth of the bottle before the rubber is put in place. When the rubber is attached to the stopper itself, as in Lamont's patent, manufactured by the firm, the stopper is dropped into the bottle. A tube is then thrust after it, which is so made that it can firmly seize one end of the stopper. A wetted

ring of indiarubber has already been placed on the tube, and when once the stopper is seized a second tube sliding over the first pushes the rubber over the stopper, the tubes are withdrawn, and the operation is complete. It is far more ingenious than putting an apple in a dumpling. Soda-water bottles are mostly made of the ordinary size, holding 10 oz., but "split sodas," holding 5 oz., are used in some cases, and special sizes, holding 12 oz., 14 oz., and 16 oz., and called "Bombay sodas," are made for the Indian market.

The demand for medicals is actually the smallest, but there are at the most only 15 firms that make them, so that they form one of the largest items in the trade of Messrs. Kilner Brothers. A consideration of the way in which bottles are made will settle for ever the question, "Can we be sure that an 8-oz. bottle holds exactly 8 oz.?" If we put the question in another form we shall see it is impossible. The mould of the bottle is, of course, always of the same size. Can the gatherer, then, who collects the glass of which the bottle is made be always sure of getting exactly the same amount of glass, so that the bottles shall always have their sides of exactly the same thickness? He has to estimate by the touch the amount of glass collected at the end of a heavy pipe some 4 feet in length. The question answers itself. The average of a dozen or a hundred will be exactly 8 oz., but the bottles may vary within considerable limits on each side of the average. The same must be said of divided bottles. The top and bottom divisions are most likely to be inaccurate. The central ones will be very near the mark, and the average will be exact. This is just another plea for the use of accurately graduated medicine measures.

Stoppered bottles of all kinds are made by the firm. One of the workmen employed on this branch said that he could stopper nine or ten dozen Winchester quarts in a day of ten hours. This allows about five minutes for each stopper. In these as in all other bottles the cost of the labour is by far the heaviest item in the cost of the bottle. Attempts have been made to produce bottles by machinery. These have been to a certain extent successful, but a soda-water bottle is elegance itself by the side of the machine-made article. When machinery is applied to this branch of manufacture the price of glass bottles will fall, and their applications will be indefinitely extended. The making a bottle does not require what is commonly meant by "skilled labour," but a certain amount of intelligence and practice is required. Lads, however, soon learn to be very fair "blowers," and we saw several at work who could not be much more than 16 years old.

Confectionery, drugs, spirits, and beers are the remaining classes of the bottle trade. Confectionery includes pickles and other articles of food besides the actual sweet bottles. Drug bottles are Winchester and corbyns (the term "quart" must now, we suppose, be omitted from these denominations, out of respect for the Weights and Measures Act), both wide and narrow-mouthed, stoppered and unstoppered, and include, we imagine, the 10-pint "pottles," such as are used for citrate of magnesia.

Spirit bottles are pale-coloured bottles, used for brandy, whisky, and the like. A very handsome bottle is that called "amber-tinted." The colour is produced by means of manganese dioxide, and is really very beautiful. Chemists would do well to examine samples of this glass when considering how to "put up" their proprietary articles.

Beer bottles form a very large branch of the bottle trade, the demand being next in amount to that for aerated-water bottles. Soda-water, whisky, and beer bottles are packed in bags; others travel in crates.

We were somewhat surprised to find that the demand for dark-blue crane-necked castor-oil bottles had not diminished. We do not yet understand how these bottles came to be used for such an unsuitable purpose. Was it that the chemists of the olden time could find so little work for their apprentices, that they invented the ingenious torture of filling these miserable bottles? Was it that the castor oil they retailed was so horrible in colour that they must hide it behind a dark veil of blue to persuade their customers to purchase it, or was it from a mistaken idea that the oil kept better in the dark? The darker the colour of the bottles the better they are liked. The tint is produced by means of oxide of cobalt, an article so expensive that even the com-

paratively small quantity used has as powerful an influence on the cost as on the colour. Its ordinary price is 14s. a pound, and at one time it cost as much as a guinea.

It seems an age since we indulged in the hope that toughened glass would render the fracture of a bottle a forgotten thing. But,

Like that glassy bubble
Which finds philosophers such trouble,
Whose least part cracked, the whole does fly,
And wits are cracked to find out why.*

toughened glass has an unpleasant habit of "going off" when least expected, which has seriously injured its popularity. In conclusion, we must thank Messrs. Kilner Brothers, and especially the gentleman who courteously acted as our guide, for the kind and ready manner in which they have supplied us with all the information we asked for.

SALICIN AND SOME OF ITS DERIVATIVES.

By MR. JAMES T. BROWN, F.C.S.

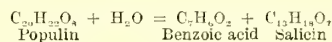
(Paper read before the Chemists' Assistants' Association, October 9, 1878.)

MR. CHAIRMAN AND GENTLEMEN,—As I am not engaged in either medicine or pharmacy I feel I must ask your indulgence for a short time this evening. From a strictly utilitarian point of view the time occupied by my remarks may be regarded by some as time wasted.

I propose to regard salicin this evening simply in the light of pure chemistry—that is, as the nucleus of an investigation, or a series of investigations. In inorganic chemistry salts are always studied in groups, either as containing the same metal or the same acid radical. In the same manner the synthetical investigations which are now being carried on in organic chemistry, are enabling substances which have hitherto been studied as isolated bodies to be arranged in groups.

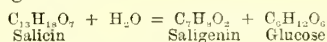
Willow-bark, which is the most readily available source of salicin, did not escape the notice of *Nicholas Culpeper, Gent., Student in Physick and Astrology*, as we find in his curious work that "Galen saith, the flowers have an admirable faculty in dressing up humours, being a medicine without any sharpness or corrosion. You may boyl them in white wine and drink as much as you will," adding the reminder, "so you drink not yourself drunk"; and then he continues in his quaint style, "The bark works the same effects if used in the same manner, and the tree hath alwayes a bark upon it, though not alwayes flowers."

To prepare salicin, the finely-chopped willow-bark is boiled with lime and water; the filtrate from this operation is evaporated to dryness. The crude salicin thus obtained is decolourised by animal charcoal, and purified by recrystallisation from spirit. In the absence or dearth of willow-bark, poplar-bark may be used, but in that case we must bear in mind that the crude salicin is contaminated with benzoate of calcium, since

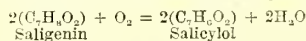


In addition to the sources above-mentioned, it is also found in castoreum, a secretion of the beaver.

The action of weak acids, or emulsin and water, or saliva, is to cause salicin to assimilate water and split up into saligenin and glucose.



Although in the oxidation of salicin, saligenin is doubtless the first product, yet in practice this is constantly followed by the second stage in the reaction, as, on collecting the distillate from a mixture of salicine, bichromate of potassium, sulphuric acid, and water, we obtain salicylöl—

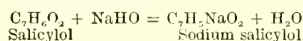


a volatile oil which is found as a natural product in meadow-

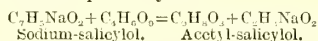
* Butler's "Hudibras."

sweet (*Spiraea ulmaria*), and various other spiraeae. It also exists in the beetles *Chrysomela populi*, and in the secretions of their larvæ. Here it is interesting to note that while the beaver secretes salicin, the beetle secretes the oxidised product, salicylol.

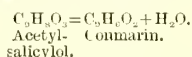
The next step is to prepare the compound sodium salicylol (salicylate of sodium), by neutralising an alcoholic solution of salicylol by solution of soda.



The next step is to replace the sodium in the last compound by the organic radical acetyl, and, although in practice this substance is not isolated, we must not ignore it because, as an intermediate product, it possesses great interest. It is prepared by adding acetic anhydride to anhydrous sodium-salicylol suspended in pure dry ether.

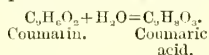


This body if heated with acetic anhydride remains unchanged, and yet if sodium-salicylol be heated with acetic anhydride the product is not acetyl-salicylol but coumarin, since the acetic anhydride acting in the presence of the acetate of sodium removes the elements of water.



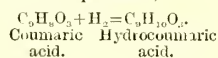
If we vary the reaction by adding acetate of sodium to the mixture of acetyl-salicylol and acetic anhydride, we then obtain coumarin on heating. Why acetate of sodium, which is found unchanged at the end of the operation, should favour the dehydration it is not easy to explain; the readiest way of getting over the difficulty is to say that it is due to *catalysis* or *contact action*. The addition of ferric oxide to chlorate of potassium and of cobaltic oxide to hypochlorite of calcium and water in making oxygen are parallel cases.

Coumarin, which is extracted with the utmost facility from Tonka beans (*Dipteryx odorata*) also occurs in *Melilotus officinalis*, besides other plants, yields, on being boiled with strong solution of potash, coumaric acid,



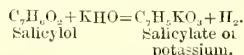
And here I would call your attention to the fact that although artificial coumarin is formed by the dehydration of acetyl-salicylol, yet when it again takes up the elements of water it yields an essentially different body, viz., coumaric acid, whose formula $\text{C}_9\text{H}_6\text{O}_2$, is identical with that of the substance from which the coumarin was derived.

If instead of treating coumarin in the manner just described we dissolve it in weak alcohol, and submit it to the slow action of sodium-amalgam, then, in addition to the elements of water it takes up hydrogen and yields hydrocoumaric (*Melilotic*) acid,—a natural product,—

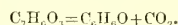


which is found combined with coumarin in *Melilotus officinalis*.

If salicin, instead of being treated as we have described in the preparation of salicylol, be added by degrees to fused hydrate of potassium the oxidation does not stop at that point, but hydrogen is evolved, and we obtain salicylate of potassium.



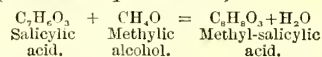
This acid (salicylic) which is found in small quantities in the flowers of the *Spiraea ulmaria*, has lately acquired great notoriety on account of its being used as an antiseptic and as a therapeutic. If heated under favourable conditions it resolves itself into phenol (carbolic acid) and carbonic anhydride,



and here it furnishes the clue to its artificial production, for if sodium-phenol be cautiously heated for several hours in an atmosphere of carbonic anhydride, salicylate of sodium is formed. Seeing then that it can not only be readily formed from carbolic acid, but that on being decomposed by heat it betrays its origin, we cannot be surprised at its antiseptic

properties. As to what are antiseptics: that is, as to why some substances should be harmless, or practically so, to the higher and more developed forms of life, and yet at the same time be so fatal to, or act as such a thorough check to the development of the lower organisms, we are entirely in the dark. Tyndall showed that perishable substances could be kept in contact with air for some time provided the air was clean, and, therefore, absolutely free from dust; and he attributed decomposition to the presence in the air of smaller than microscopic germs, be they animal or vegetable. The theory that several of the mysterious and terrible diseases are due to fungoid germs, is held by so many leading men that it is well-nigh universal; and the fact that some constitutions are attacked by those germs, while others are able to withstand and repel those attacks, does not at all militate against that theory, since the genus *homo* comprises beings with internal arrangements of very different degrees of strength and susceptibility. Some—in fact, most—can eat mushrooms, and enjoy them, while others dare not partake of them, as they run the risk of experiencing the most distressing sensations.

If, instead of decomposing the salicylic acid by heat, we boil it with methylic alcohol and sulphuric acid, we obtain methyl-salicylic acid, which is salicylic acid with one atom of hydrogen replaced by methyl, and here we have oil of wintergreen (*Gaultheria procumbens*).



This acid, which exists also in the bark of the sweet birch (*Betula lenta*), is the last of the salicin derivatives to which we shall refer this evening. It is the most readily available source of natural salicylic acid for medicinal purposes, as it yields with facility a very pure product.

If now we look back and see that the intervals between the natural compounds have been occupied by substances which possess no interest whatever (except theoretical) and when we consider that it is by working on, in spite of these uninteresting links in the chain, that we have obtained artificially most interesting odoriferous bodies, we can have no sympathy with the following remarks by the editor of the *Chemical News*.

"It really would seem that our rising chemists occupy themselves less and less every year with researches in inorganic chemistry, except there is something tangible in a pecuniary sense hanging to them. . . . A glance at any chemical periodical will show this at once, although England and America can lay claim to the privileges of a more extended cultivation of this branch of chemistry than either Germany or France. It is, no doubt, a proud day for a student when he has succeeded in squeezing one or more additional atoms of hydrogen or nitrogen into some almost unknown organic compound; but when so many simple everyday facts are crying out loudly for investigation, it seems to me a misapplication of mental energy."

Nor with the following paragraph in which a correspondent of the same paper signifies his approval:—

"It is melancholy to take up the journals and the *Jahresbericht* and find them full of ——— guesses about the probable constitution of some complex, useless, and need-less organic substance, while important practical matters in inorganic chemistry are calling aloud for investigation."

I say, let the *bonâ-fide* workers plod on in both domains of chemistry, and do not find fault with those who give new substances long names, if those names are an indication of how the bodies are prepared, or afford them any assistance in their labour of love.

RELIGION AND CHLOROFORM.—Dr. Richardson recently gave a Sunday afternoon lecture on "Anæsthetic Sleep and the Temporary Abolition of Pain." He remarked that the credit of having introduced chloroform belonged to the late Sir James Simpson, of Edinburgh. Its introduction and application were objected to on religious grounds, some people contending that man, according to Scripture, should endure pain and trouble throughout life. Sir James Simpson threw the scriptural argument back upon those who used it, by saying that when the first man had an operation performed upon him he was put in a deep sleep, and knew nothing of the time when the rib was taken from him.



MOTTO FOR THE CREMATIONISTS.—"We earn our living; why should we not urn our dead?"

FLIES MAY BE PREVENTED from alighting on mirrors, &c., by washing them with water in which an onion has been soaked long enough to give it a slight odour.

A COUNTRY DOCTOR announces that he has changed his residence to the neighbourhood of the churchyard, which he hopes may prove a convenience to his numerous patients.

CUBEBS.—An American has introduced prepared cubebs, to be smoked in cases of catarrh, asthmas, throat diseases, hay-fever, &c.

WHEN does a brass door-knob put you in mind of two eminent musical composers and a famous *prima donna*?—When it has a Verdi-Grisi Handel.

THE REPORT of an Irish benevolent society says:—"Notwithstanding the large amount paid for medicine and medical attendance, very few deaths occurred during the year."

"AN ATTORNEY," says an ingenious writer, "is the same thing to a barrister that an apothecary is to a physician, with this difference—that your lawyer does not deal in cruplcs."

It is an open question, says the *Darlington Hawk Eye*, whether the United States has more religious than patent medicines. The religions are probably the more numerous, but the medicines keep up the finest cemeteries.

"SEE HERE," said an eccentric old man to an office boy who had brought a doctor's bill to him. "See here; tell our master that I'll pay him for the items of medicine charged in this bill, but as for the visits, why—I'll return *nem!*"

THE BLUE PILL AND THE BLACK DRAUGHT.—A distinguished artist feeling unwell, consulted, a few days ago, an equally distinguished physician. "Take," said the latter, "two nocturnes in blue when you go to bed, and an arrangement in black the next morning."

PURE AND SIMPLE.—"Are these pure canaries?" asked gentleman of a bird-dealer with whom he was negotiating for "a gift for his fair." "Yes, sir," said the bird-dealer, confidently; "I raised them 'ere birds from the very best canary seed."

BENZINE AS VERMIN AND MOTH KILLER.—The Austrian government has adopted in its military establishments the use of benzine as a vermin-killer, and finds this process quicker and more effective than the old method of baking. On page 539 of our last volume we mentioned that benzoline as one of the most effectual destroyers of moths.

TO REMOVE FUSEL OIL AND CLARIFY LIQUORS.—A powder is prepared consisting of 30 parts of pure starch, 150 parts of powdered albumen, and 15 parts of sugar of milk. About 7 oz. of this powder will be sufficient for 2 gallons of liquor, which, when well shaken and allowed to stand for settling, may be decanted free from fusel oil and perfectly clear.

COPAL VARNISH FOR PAINTINGS, &c.—Fuse 8 lbs. of the very cleanest pale African gum copal, and, when completely melted, pour in 2 gallons of hot oil; let it boil until it will sing, and in about 15 minutes, or while it is yet very hot, stir in 3 gallons of turpentine. Perhaps, during the mixing, a considerable quantity of the turpentine will escape, but the varnish will be so much the brighter, transparent, and fluid, and will work freer, dry more quickly, and be very solid and durable when dry. After the varnish has been strained, if it be found too thick, heat as much turpentine as will bring it to a proper consistence, and mix with it before it is quite cold.

DENTISTRY IN NEW ZEALAND.—A lady recently returned from New Zealand informs us that she had to travel over 50 miles to the nearest dentist. When she reached his house he was too intoxicated to attend to his business, and she remained in the place a week before the dental operation could be performed. New Zealand must be a good scope for a teetotal dentist!

ARROWROOT.—A French doctor insists that the story that arrowroot is so called because some Indians used it to heal the wounds made by poisoned arrows is a delusion. He says it is simply an English corruption of the indigenous name of the plant, *arou-arou*. Other authorities insist as vehemently that the Indian name is a corruption of the English.

INK.—Stömer finds that a cheap black ink, not affected by chemicals and not easily washed off, can be made with nigrosine and aluminium acetate. The brand of nigrosine made in Belgium, and called *Noir perfectionné*, must be used: 12 grains to an ounce of water, with 12 grains of aluminium acetate, will make an intense black ink. This nigrosine is sold only by Mr. E. Stömer, of Breslau, at 30 marks a kilogramme. The method of fixing is imparted to each purchaser.

PAPER DENTISTRY.—Paper-teeth are the latest novelty. You buy them by the quire as you require them, on trade terms, "26 as 24." The run is on ivory and cream-laid, few earing for blue-wove or black-edged teeth. Of course, paper has the advantage of being easily gummed in. They improve the speech; indeed, a man with a complete top and bottom plate paper set will talk like a book. Few have them either with crest or monogram.

TESTIMONIALS.—Mr. P. Hinekes Bird writes to the *Sanitary Record* complaining of the system of analysts giving testimonials for publication. He has heard on unimpeachable authority that one distinguished testimonial-giver offers to report favourably on any article for 5 guineas. Mr. Bird does not do that sort of business. Once applied to with a specimen, he says he replied thus:—"Gentlemen,—I have tasted your — Whisky, and, having tried various vermin-killers in my time, believe yours superior to them all. You are at liberty to make use of this."

TALL TALK.—A certain American preparation of cod liver oil, known as cod liver oil chyle, is largely advertised in the pharmaceutical journals. One sentence of the advertisement is as follows: "In this process no incompatible substances are employed, chylification being accomplished by the aid of lactose, hydrate glyceryl, gummate calcium, hydrogen protoxide, combined lactic acid, diastase, and pure pancreatin combined with an equal quantity (in bulk) of pure cod liver oil," which, being interpreted, means that an emulsion is made with milk sugar, glycerine, gum-arabic, water, &c.

"TO PUPILS IN ELOCUTION."—These lines, by Mr. Charles A. Prince, of Boston, originally appeared in the *Harvard Advocate*:—

The human lungs reverberate sometimes with great velocity
When windy individuals indulge in much verbosity,
They have to twirl the glottis sixty thousand times a minute,
And push and punch the diaphragm as though the deuce were in it.

CHORUS—

The pharynx now goes up;
The larynx, with a slam,
Ejects a note
From out the throat,
Pushed by the diaphragm.

—*Scribner's Monthly*.

DOCTOR AND PATIENT.—"Save me, Doctor, and I'll give you \$1,000." The doctor gave him a remedy that eased him, and he called out, "Keep at it, Doctor, and I'll give you a cheque for \$500!" In half-an-hour more he was able to sit up, and he calmly remarked, "Doctor, I feel like giving you a \$50 bill." When the doctor was ready to go, the sick man was up and dressed; he followed the doctor to the door, and said, "Say, Doctor, send in your bill the first of the month." When six months had been gathered to Time's bosom, the doctor sent in a bill amounting to \$5. He was pressed to cut it down to \$3; after so doing he sued to get it, got judgment, and the patient put in a stay of execution.—*Danbury News*.



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

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RENDALL'S THEOBROMINE, OR CONCENTRATED COCOA,

BEING a first-class article, and nicely got up, commands a good sale by all Chemists who bring it under the notice of their customers.

In 1s., 2s., 3s. 9d., and 7s. 6d. tins, through the Wholesale Houses, or direct from the Proprietor,

J. M. RENDALL,
28 QUEEN STREET, EXETER.

Chief Wholesale Agents—

SANGER & SONS, 150 OXFORD STREET, W.

HAWKER'S JUJUBES. See page 5.

MUMFORD'S PURE CRUSHED LINSEED.

PRIZE MEDALS: LONDON, 1873; PARIS, 1875.

20s., net, per cwt., Bag included; or 21s. in 1-wt. Cask; in 14-lb. and 28-lb., 22s. per cwt., delivered in London. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground so as to retain the natural colour of the Seed without being heated. Special quotations for Larger Quantities. Samples, Reports, and Analyses on application, post free.
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All Chemists are invited to apply for a Copy of our Wholesale Price List of HOMŒOPATHIC MEDICINES,

Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests and Cases, Glass and Cardboard Goods, and all Sundries connected with the Homœopathic Business.

W. BUTCHER & CO., Wholesale and Export Homœopathic Chemists, Spencer Place, Blackheath, London, S.E.

SEE SEABURY & JOHNSON'S Advertisement of INDIA RUBBER POROUS AND SPREAD PLASTERS on page 125.

STEDMAN'S TEETHING POWDERS.

1/11 ¹ / ₂ size (containing 9 powders)	8/6 per doz.	} less usual discount.
2/9 " " " 27 "	24/-	
11/- " " " 216 "	11/- net.	

A mixed parcel to value 78/- net, at 6/6, 18/-, & 120/- per doz.

Terms Cash with Order.

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Sold by Chemists throughout the Kingdom.

FOR TERMS, ETC., APPLY TO

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Wholesale Agents to the Analysed Tea Association,

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EVANS, LESCHER & EVANS, WHOLESALE & EXPORT DRUGGISTS,

Beg to announce that owing to the **RE-BUILDING OF THEIR PREMISES** at BARTHOLOMEW CLOSE, E.C., they have REMOVED to Temporary Warehouses at

**72 & 74 GOLDEN LANE,
BARBICAN, E.C.**

UNGUENTUM PETROLEI. See page 92.

REDUCTION IN PRICES.

GENERAL MINERAL WATERS DEPÔT
27 MARGARET STREET, REGENT STREET,
LONDON.

PURE COD LIVER OIL. See page 78.

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E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital,
Manufacturing Homœopathic Chemists,

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

For Particulars apply at 59 Moorgate Street, E.C.

ELLIMAN'S EMBROCATION. See page 33.

EDITORIAL NOTES.

THE APOTHECARIES' APOLOGIA.

THE Clerk to the Society of Apothecaries has thought fit to publish a statement explaining the grounds on which the Society had given their consent to the prosecution of Mr. Shepperley for the alleged offence of having given a shilling's worth of medicine for a simulated sore throat. Simple people were not quite able to make obvious facts agree with certain assurances which Mr. Upton had given in writing to the solicitor of the Pharmaceutical Society. On February 5, 1878, Mr. Upton said he was prepared to affirm that he had not during the time he had acted as solicitor to the Apothecaries' Society authorised any prosecution in a case of pure and simple counter practice, and he added that he should not do so as long as he held the office referred to. A few months later the Shepperley case came before the Court of Exchequer. It turned out to be as simple a case of counter prescribing as could well have been selected, and yet it was fought tenaciously by eminent counsel, who declared that they were representing the Society of Apothecaries, and when lost in one Court was appealed against in another. We cannot be surprised that a gentleman finding himself in the position of Mr. Upton should have felt it necessary to set himself right with those

whom he seemed to have misled. Mr. Upton states in effect that the consent of the Apothecaries' Society to this prosecution was obtained by means of representations which, though they may not have been false, were at any rate not maintained in the Court of Exchequer. He also declares that, if the Society had known that any evidence to be given at the trial had been obtained by a paid informer, the consent of the Society to the prosecution would have been immediately refused.

It may be said that, holding such views, when the real nature of the case came out before the judge of the Nottingham County Court, the Society of Apothecaries might have refused to let it go further. Instead of that they actually contributed 50 guineas in support of the prosecution. Mr. Upton defends this conduct, not unreasonably, on the ground that the question for the Superior Court was a point of law of great importance to the Apothecaries' Society. The case came on, and a new trial was ordered. Here was another opportunity for the Society of Apothecaries to withdraw. It was clearly impossible for them to go on without distinctly accepting the case which had been prepared for them. Then would have been the time for the Apothecaries' Society to declare their policy. They would have gained honour for themselves and would have lost no fraction of whatever legal power their Act gives them. To deserve the expression of their more creditable sentiments until after their counsel had done their utmost to win the sympathy, first of a jury and then of the public, for precisely contrary views was not artistic. The jury laughed at Mr. Day's pompous pleading about the sacredness of the diagnosis of a pimple, and the public, as represented by all the lay journals, showed itself unitedly indignant at the claim set up on behalf of the apothecaries to a vested interest in everybody's diseases. The attention given to the case, of which, says Mr. Upton, it was wholly undervalued, seems to have had some influence in the production of this manifesto.

But there is some force in Mr. Upton's apologetic argument that, if the Society had withdrawn from the case in the face of the direction of the Exchequer division, there might have been left an impression that the Society were afraid of a legal decision on the 28th section of the Act. They went on, and, as Mr. Upton rightly claims, they got a legal judgment from Baron Pollock entirely in favour of their contention, even though the case broke down on the facts. What better could the Society of Apothecaries want? They as good as admit that they were ashamed of the facts, and they maintain that they were merely striving for a legal point. They have secured their desire, and still they are not contented. "By their fruits shall ye know them." The Society of Apothecaries has again reached a point where they can withdraw from a case which can only bring them discredit. If they go on, we can only conclude that they are either determined to fight all development of counter practice to the utmost, or are helpless in the hands of bolder and less scrupulous partisans. In either case we shall know in future how to esteem those pretty little essays which pass between Mr. Upton and the *Pharmaceutical Journal*.

Since the preceding note was written a more definite, though still an informal, announcement has been made by the Clerk to the Society of Apothecaries, from which it appears that the Society withdraws its sanction from any further proceedings in the Shepperley case. Of course we are not bound to assume that this course has been taken entirely from generous motives. The chance of success on appeal was about as thin as the most subtle lawyer could

desire, and it was, besides, just possible that, together with a subsequent defeat, some judicial utterances might have spoiled the flavour of Baron Pollock's recent definition of the law. Anyhow, win or lose, the apothecaries could only be absolutely sure of securing for themselves a renewed share of public indignation. Nothing would have so certainly ensured a repeal of the Act as a victory on the strength of it in the Court of Appeal.

The Shepperley case is, therefore, we suppose, at an end. Both parties may claim a victory. Actually and morally, it is the chemists that have gained; technically, the apothecaries have secured in the judges' ruling the confirmation of their contention. The enormous advantages which the chemists have obtained by the defence of the case are obvious to all impartial observers, and will one day be apparent to the most prejudiced Pharmaceutical Councillor. The newly-born toleration of counter practice comes very naturally now, but it is a different tune to the one which we heard just after Baron Bramwell's famous judgment.

It need hardly be said that the work of the Trade Association is yet unfinished. We are by no means disposed to echo the cry of "No compromise," which was several times heard at the special meeting last week. The chief embarrassment to those who have taken in hand the maintenance of chemists' fair privileges has come from the class of druggists, who strain every privilege to its utmost extent, who cultivate a prescribing trade by means of devices intended to deceive the unwary as to their qualifications, and whose unbounded confidence in their own ability is equalled only by their contempt for the men who have at least been specially trained for the responsible duties of a medical adviser. These men are the Jonahs of our freight, and we may candidly say that we will in no sense defend or support them. But the immediate work now before us is to get the 20th section of the Apothecaries Act repealed. Barons Pollock and Bramwell have so interpreted the Act that it is clearly inconsistent with the reasonable liberty which a chemist and druggist should for the public benefit possess, and with determination and concentration of force, the result could be gained, and should certainly be attempted before the public feeling cools. Mr. Schacht has written to a contemporary picturing the impossibility of going to Parliament to ask for legal sanction for chemists and druggists to practise medicine. We do not regard this as serious argument. No one has suggested any such course. All that is asked is that the law should be what it was understood to be when the Medical Act of 1858 was passed, and before it was discovered that the old Apothecaries Act gave such monstrous power to a trading corporation. So much as is necessary to give chemists reasonable liberty could be accomplished if the Pharmaceutical Society and the Trade Association would combine their efforts for the purpose, and if this is not done it will be the fault of the former body.

ANALYSES IN 1877.

And chalk, and alum, and plaster are sold to the poor for bread

While another is robbing the sick of a few last gasps as he sits
To pestle a poison'd poison behind his crimson lights.

TENNYSON—"Maud."

THE report of the Local Government Board for the year 1877, published a few weeks since, shows that a considerable improvement has been effected in the quality of foods and medicine since Dr. Hassall drew attention to the subject in 1854-56. Of the samples analysed by him considerably more

than half were condemned. In the year 1877, 14,706 samples of food and drugs were examined by the analysts appointed by 153 authorities. Nineteen per cent., or 2,826, of these were found to be adulterated, and 'if the one article of spirits be excluded from the calculation the percentage of adulteration is reduced from 19.2 to 15.5 in the country generally, and from 13.4 to 12 in the Metropolis.'

To the total of 14,706 analyses, milk contributes no less than 4,435. A thousand and seventy of these were found to be adulterated, or 24.1 per cent. Unenumerated articles amount to 3,025, of which 299, or 9.8 per cent., were adulterated. Of spirits and gin 1,385 samples were examined, and 771, or more than 50 per cent., were condemned, but the only falsification was water.

Bread and flour seem favourites with the analysts; 1,596 samples were examined, but only 110 were condemned, the adulterant in each case consisting of small quantities of alum. The remaining 4,000 analyses dealt with were butter, coffee, sugar, mustard, pickles, wine, confectionery, and drugs.

Five hundred and three samples of drugs were examined, and 110, or 21.8 per cent., were reported as adulterated. But the abstract of analysts' reports shows an enormous variation in the quality of the drugs or analysts of different districts. In the Metropolis and Sussex of 189 samples examined, 13, or 6.9 per cent., were said to be adulterated. In Lancaster Stafford and the West Riding 198 were examined, and 69 or 35.7 per cent. were reported impure. The large number of analyses will probably obliterate accidental circumstances, and the conclusion to be drawn from the bare statement of the case is that in the three districts of Stafford, Lancaster, and the West Riding, five times as many adulterated drugs are sold as in the Metropolis and Sussex. This is incredible. A much more feasible explanation is provided by the following passage from the official report.

'In the compilation of the abstract of the reports there has been some difficulty in making the broad distinction between "adulterated" and "unadulterated" articles, owing to the fact that some analysts rank as adulterated all samples which are not chemically pure; others state the results of the analysis, but not their opinion as to the conclusion to be based on those results; others again stigmatise as "adulterated" only those samples in which the amount of admixture is exceptionally great. These considerations must be held in view in reading the abstract; and it must be also remembered that as regards a very large proportion of the samples which are broadly classed as adulterated, proceedings have not been taken; and, indeed, could not have been successfully maintained.' P. xciii.

It would be simply an act of justice to the tradesman if the Local Government Board required analysts to state in their report in how many cases the vendors had been successfully prosecuted. It is possible that the Board does not possess power to enforce this return, but in that case analysts would act more honourably than at present if they voluntarily published this detail. The present reports are a serious injustice to the retail trade.

SALE OF FOOD AND DRUGS ACT, 1875.

MESSRS. ANDERSON, P. A. Taylor, and Whitwell, members of Parliament, have prepared and introduced "A Bill to Amend the Sale of Food and Drugs Act, 1875," which was ordered by the House of Commons to be printed on December 10, 1878. It contains only four sections and 24 lines. Section 1 is the short title. Section 2 provides that in the sale of adulterated articles it shall be no defence to allege that the sample was purchased for analysis, and that, therefore, the

purchaser could not be prejudiced. Section 3 extends the meaning of the word "county," and has no bearing on the seller. Section 4 permits the sale of diluted brandy, whisky, and rum, when they have not been reduced below 25 per cent. under proof, and of gin not more than 30 per cent. under proof. If this Bill becomes law, it will deprive adulterators of a defence which has been the more popular because it has rested on a mere verbal quibble.

INFINITESIMALITY.

WHATEVER we may think of the administration of infinitesimal doses of medicines as a practical fact, and whether we accept or reject the evidence which is often alleged in their favour by the thick-and-thin followers of Hahnemann, it cannot be denied that a good deal of ingenious argument may be put together in favour of the theory; and, further, that the basis for this argument has been extended very largely by scientific investigation since Hahnemann first promulgated the doctrine. In introducing a course of lectures on the Homœopathic Materia Medica, Dr. Richard Hughes recently gave to the few students who attend the London School of Homœopathy a thoughtful and attractive exposition of homœopathic posology. He is not himself a regular "high dilutionist," his practice stopping at the 30th centesimal potency, and only reaching this in occasional instances. Now, the third centesimal dilution contains 1 part of active principle in 1,000,000 parts of the dilution or trituration. By adding two ciphers for every dilution from the 3rd to the 30th, the student will get at a figure which represents what the latter is supposed to be. Dr. Hughes adds that many physicians of scientific reputation employ the 200th dilutions, and he declares that the evidence of the efficacy of such attenuated medicines is undeniable. He further tells us that there are homœopathists in America who have made the 1,000th potency a new unit, and have started from that to the 1,000,000th and even to the 1-10,000,000th. This, however, is too strong, or rather, perhaps, too weak a dose for our lecturer, and he suggestively points out that to make the medium dilution of these extravagances 2,000 gallons of spirits of wine, a million phials, and over a year of perpetual shaking would be required. It must not be supposed however that the advocates of these apparent absurdities have nothing to say for themselves. The case is very much the contrary. They have various theories of "dynamisation," to a few only of the most prominent of which we can allude. The simplest idea is that the separation of a medicine into multitudinous particles, extending its surface of action, makes it so much the more potent. Others have a fantastic theory that 'spirit is somehow developed from matter by vigorous rubbing or shaking. A third section believe that the law of the transmutation of force obtains in this supposed development of power; that is to say, that the power expended in shaking or triturating is added to the activity existing in the medicine, and takes its character. Lastly, the theory has found supporters that the drug transfers its energy to the vehicle, and, we suppose, proceeds by a sort of cell-like development.

All these fancies seem rather out of place in such a serious occupation as the treatment of disease. We refer to them as exuberances of imagination. But within moderate limits there is more to be said for infinitesimal doses than some people may imagine. The existence and energy of the infinitely little are, Dr. Hughes claims, abundantly substantiated by the scientific researches of the past 30 years. Calculating according to Clerk-Maxwell's theory of the size of atoms, we have the astonishing result that a grain of the third trituration of arsenic, for instance, would contain no

less than 576 millions of particles. Mercury is a familiar instance of the development of medicinal power in a substance by trituration, and it is conceivable that other substances may be affected in like manner to a certain limit. The Clerk-Maxwell theory will not, however, allow for the distribution of atoms to more than the 12th or 14th attenuation, so that if scientific arguments be adopted it must be perfectly understood that too much is not to be expected of them.

Dr. Milner Fothergill has killed a guinea pig with the 1-1,130th of a grain of aconitine, and effects have been distinctly traceable from the 1,000,000th part of a grain of strychnine administered to frogs. Now, if there be any truth in the opposite action of drugs in small and large doses—and it is universally admitted in certain instances—these observations are of some importance in respect to infinitesimality. If, for instance, ipecacuanha wine in drachms will cause vomiting, and in drops will cure it, what dose of strychnine may be considered remedial if 1,000,000th of a grain will produce actually poisonous effects?

These are but isolated points of Dr. Hughes' able lecture, which is published in full in the last number of the *Quarterly Journal of Homoeopathy*.

THE ELECTRIC LIGHT.

WITH the public attention so prominently directed to the means of illumination by electricity, the Council of the Pharmaceutical Society have done well to engage their eminent senior professor, Dr. Redwood, to explain in two lectures the principal features of recent inventions in this direction. The first lecture was delivered on Wednesday evening, January 8, and the second is announced for this evening (January 15). Last Wednesday the theatre was completely full, and Dr. Redwood's lecture, which lasted an hour and 50 minutes, was most attentively listened to. It was a most lucid exposition of the history of electric lighting, enabling all who heard it to comprehend the characteristics of the several systems now before the public, with illustrations of which the lecture terminated.

Commencing with the remark that exactly 30 years ago (the lecturer) had delivered a lecture on the same subject in that theatre, Dr. Redwood explained briefly what was the position of electric lighting at that period. The subject was then occupying public attention in very much the same way as it was now. It was known that by electricity a brilliant light could be produced, which Sir Humphry Davy and Faraday had publicly demonstrated, and the improvement effected in galvanic batteries by Daniel, Grove, and Lunsen had rendered this comparatively easy of attainment. A light of great intensity and purity could even then be obtained, which, it was hoped, might be made available for many, if not most, of the purposes for which artificial light was required. At that time the galvanic battery was alone looked to as the probable source of electric light, and it was remarked that the production of light from the galvanic battery was just like all other means of illumination, such as gas or candles—result of chemical action. In the one case, the zinc plate was consumed, and in the other hydrocarbons in one form or other were brought into direct contact with oxygen. The difference between current or dynamic electricity as obtained from a galvanic battery, and static electricity as obtained from a Leyden jar, was experimentally illustrated by passing the first continuously through a wire, and by making a spark from the second. Current electricity was necessary for the production of the electric light because it is a continuous current, and also because of its comparatively feeble tension. When the subject was treated 30 years

ago it was known that current electricity could be also produced from magneto-electric machines, and he exhibited now the identical Saxton's machine which he had used at his earlier lecture, and produced a light from it. The cost and inconvenience of management of galvanic batteries were recognised then as difficulties; but still it was to galvanic force that the future of electric lighting was supposed to belong. What that had failed to accomplish, however, another power was now seeking to develop; and it was now to engineering skill, with its adjuncts, coal and iron, as the motive power, that success was to be looked for if it was attained. While chemists were messing with their fuming acid-pots, King Coal came with engineers and mechanics and fairly pushed them off their stools. It was by means of the combustion of coal that the power was developed which worked the lights on the Thames Embankment and the Holborn Viaduct, and thus coal might be said to find itself face to face with itself in different dresses. He hoped the result would not be the same as had happened to the contest between the feline inhabitants of the sister island. He hoped we should not be tempted to exhaust our coal-fields in an unprofitable contention between gas and electricity, or a useless attempt to violate the laws of nature by converting night into day. He thought that both systems of lighting would find their appropriate applications, the one supplying, as at present, sufficient light for ordinary purposes, and the other affording a more intense light for special applications. He likened the electric light to the railroads, which at first it was imagined would entirely supersede horse-power. When railroads were first introduced it was too readily imagined by some persons that horses would be no longer required, and would become wild animals of our woods; but no such result had happened. The contest between electricity and gas would probably prove analogous. There was no doubt a great future for the electric light, but gas, from the ease with which it could be managed, would always be useful for numerous purposes, and so far from our requiring more or stronger light than we have at present he questioned whether we did not already employ too much artificial light.

It was in the year 1858 that a great movement towards the development of the electric light had been made. A Mr. Frederick H. Holms had constructed some enormous magneto-electric machines for a company in Paris which proposed to manufacture gas from water. That enterprise was a failure, but Mr. Holms conceived that his machines might be utilised for the production of the electric light for lighthouses. After some time the experiment was successfully made in several lighthouses. Then improvements had been made in these magneto-electric machines, and much greater power was now obtained in very much smaller machines. A Gramme machine, and the Dynamic machine, for which it was claimed that a current could be obtained without a permanent magnet, were exhibited, but an explanation of the principle of these, and a discussion of the claim put forth in respect to the latter, were reserved for the next lecture, to be delivered this day (January 15). Professor Redwood concluded his lecture by exhibiting several of the lamps now adopted. The Rapiëff lamp, as used in the *Times* office, was shown by diagrams to be similar in principle to one exhibited 30 years ago, the identical diagrams used in the previous lecture being shown. It consists in bringing the carbon points together on a bed of plaster of Paris, the points forming the apex of a triangle, and keeping them in position by means of springs. In the Rapiëff lamp, however, the carbons are in duplicate, so that one may be replaced, if necessary, without letting the lamp be extinguished. The Jablockhoff candle consists of two carbons in a vertical position, supported and separated by plaster of Paris, and with a thin

carbon bridge at the top. This gives a splendid light, but it is necessary that the motion of the machine should be continually changed at the rate of some 600 or 700 times a minute, so that the holes are alternately positive and negative. The bridge is liable to accidents, however, and the lamps are constructed with two or more candles in each, with mechanism, so that if one goes out another is at once brought into contact. Even then, however some of the lamps fail, and, as a matter of fact, an attendant has to be kept near the lamps all the while they are in action. The Wallace-Farmer lamp was also exhibited. This consists of two large discs of carbon, and as the positive disc becomes hollowed out, the light gradually travels all over the disc, thus changing its position. It gave an excellent light, but it splutters a little, and the change of position which the light undergoes is thought for some purposes to be a disadvantage. But it is in a very compact form, and can easily be hung in any place and connected with wires. Lastly, the Werderman lamp was exhibited by Mr. Werderman, and this Dr. Redwood spoke of very highly. The inventor has, after many experiments, found that he can moderate the light, and to a considerable extent divide it. It gave a very steady light, and by no means an insupportable one. The principle of this is that the positive carbon is the lower one, and consists of a very thin pencil, which is kept in continual contact with the negative carbon above it, and which is a disc 64 times its diameter.

The experiments were all perfectly successful, and the audience followed them and the explanations with great attention and pleasure. A cordial vote of thanks was passed to Dr. Redwood on the motion of Mr. Williams, who presided.

VIOLET POWDER.

WE reported last month a decision of the Salford magistrates in Session, to the effect that there was no recognised and standard formula for violet powder, and therefore no legal obligation to make it either wholly or partially of starch. In the face of that decision the Lambeth magistrate, who may or may not have known of it, has mildly fined a chemist for supplying to an inspector a compound which was not starch, on the evidence of Dr. Bernays, that violet powder should be pure starch scented by orris root. These constantly intersecting magisterial decisions are vexatious enough, but they might at any rate be reduced to a minimum if tradesmen themselves could be induced to take sufficient interest in their own affairs to watch the progress of events connected with their business. In the Lambeth case Mr. Chance (the magistrate) had adjourned the case for the reason that he was hardly satisfied as to what violet powder really was. Neither at the second hearing nor at the first does the chemist appear to have been able to give him any assistance whatever, although evidence of the most telling character was almost ready to his hand. The magistrate had scarcely any alternative but to accept Dr. Bernays' dictum.

The Lambeth case cannot, of course, carry any weight in opposition to that decided at Salford after an exhaustive trial, but we can hardly regret that the subject has been ventilated. It has come to light that certain chemists and a certain section of the public vastly prefer the sulphate of lime and selenite compound. This of itself is a valuable piece of information, and it was certainly unknown to the majority of chemists and druggists. The difficulty which retail chemists have not unfrequently experienced of putting up violet powder so cheaply as they could buy it has also been abundantly explained.

An editorial note in the last number of the *Analyst* is of

some interest in this connection. The writer says:—"We have special opportunities of gathering the opinions of such men, and with the view of obtaining reliable data as to the recognised composition of this and other similarly mis-named articles, we have for some years been making the inquiry, 'How do you make violet powder?' and registering the result. This question has been put to nearly 1,000 practical pharmacists, and the answer may be summarised as follows:—

	Per cent.
Starch and orris root	70
Starch, orris root, and various perfumes	5
Starch, orris root, and magnesia	20
Starch, orris root, and French chalk, or magnesia and French chalk	5
	100

Notwithstanding these figures, it is added that there was no difficulty in obtaining opposite evidence by simply collecting samples of packet powders in which sulphate of lime would no doubt turn out to be the most usual basis. The *Analyst* thinks "it is a question, looking to the present state of the case, whether it is wise for analysts to give certificates without clearly stating that violet powder is at the moment an article entirely destitute of a true standard of purity. For their own sakes [Observe the tender solicitude of our amiable friends], some respectable pharmacists should combine and have a test case thoroughly argued and carried to the Supreme Court, by which means they might get rid of the packet incubus, so far as having a definite line of demarcation laid down between genuine violet powder prepared with starch and mineral dusting powders, and then the rest must remain with the public themselves to choose between quality and price."

OPIUM IN CHINA.

THE reports from Her Majesty's Consuls in China, which have just been received, contain as usual a large amount of information on the subject of opium. We have thrown together under headings some of the most interesting notes.

The Opium Trade.—At Amoy the lack of capital among the natives keeps the trade in the hands of Europeans, but "in course of time the trade must certainly pass to the Chinese, and, save as a source of revenue to India, we shall cease to be interested in it." False reports that the Government manufacture in India was to be abandoned has caused an advance of 50 dollars to 100 dollars per chest in the price of opium.

At Canton the amount of opium imported in foreign vessels has gradually dwindled down to 324 piculs.* Of course this small amount, which would barely reach a month's consumption in the city alone, represents in no way the amount actually imported into Canton, whether by junks paying regular duties or by smugglers. The total taxation being about 12 taels† the chest less at Swatou than at Canton the greater part of the coast district between the two ports is supplied from the former place.

At Foochow there was considerable fluctuation of prices in the opium trade, at times there being a rise or fall in 24 hours of 50 dollars per picul.

Opium Smoking in China.—Her Majesty's Consuls make the following remarks on the effects, injurious or otherwise, which opium smoking produces in the smokers. Charles Alabaster, Consul at Amoy, says:—

"The habit is now so general that there is little probability of much increase in the demand, unless the population of Formosa increase: when, as the use of opium is almost a necessity of life in the plantations there, to counteract the malarious influences of the climate, there must be a larger

* 1 Picul = 133½ lbs.
† 1 Tael = 5s. 10d.

export thither. Nor is it to be desired that the consumption should become greater, for although I cannot agree with those who so vigorously denounce the trade as a source of every evil, and am inclined to think from observation that many more lives are saved by its moderate use than are sacrificed to inordinate indulgence in it, an increase would now rather mark the spread of the abuse of the drug than of its employment as a stimulant to counteract the lowering effect of the climate, and damp of ill-drained houses." Page 5.

James Scott, Acting Consul at Kungchow, says:—"As to the effect of this narcotic on the population I am not in a position to speak, but although nearly everyone uses it one never meets the opium-skeleton so vividly depicted in philanthropic works, rather the reverse—a hardy peasantry, healthy and energetic; and no doubt in this damp malarious climate a mild indulgence must act beneficially as a febrifuge." Page 95.

T. L. Bullock, Acting Consul at Pakhoi, remarks:—"In Pakhoi itself the number of opium 'dens' visible to the eye of the passer-by is greater in proportion to the size of the place than in any other Chinese town I have visited. I suppose that, almost without exception, all the working men, who earn unusually high wages, smoke opium, and I am told that a good many women do so too."

Native Opium.—At Amoy "the poppy is cultivated in the neighbourhood with the knowledge and sanction of the mandarin; but so far the production of native opium has not, that I can find out, in any way affected the foreign import, as from their imperfect system of manufacture the natives are unable to produce a drug at all approaching its foreign rival in quality or flavour. I have been unable to obtain reliable returns of the amount produced."—*Chas. Alabaster.* The consumption of Indian opium at Chefoo has averaged for the past 10 years about 3,500 piculs per annum. The import for 1876 was 2,228 piculs, and for 1877, 2,154 piculs. . . . The small demand in 1876 was doubtless in some degree due to the increased growth of native opium in Shantung and Honan. Merchants engaged in this trade state that about 1,000 chests produced in one or other of the two named provinces have lately been consumed annually in districts which would otherwise have drawn their whole supplies from Chefoo. At the same time these statements must be accepted with caution. No sort of statistics are obtainable. The figure of 1,000 chests is arrived at rather as a deduction from the known falling-off in Indian opium than from independent observation.

Whatever the growth may have been in former years, however, it is admitted that the crops of both 1876 and 1877 were very poor. The two famines in Shantung and Shansi following close on each other, with all the fearful suffering they entailed, have taught the agricultural population a lesson that will not soon be forgotten. It is a widespread belief among the Chinese that these famines are a just judgment sent from heaven for the increasing cultivation of the poppy plant. The Imperial Government, too, has lately issued a stringent edict, inculcating in most absolute terms the observance of previous prohibitions on this subject. Backed as this edict will be by public opinion, it has some chance of being attended to.

The growth of the poppy has been slowly but steadily increasing in some parts of the province of Fukien, as for instance in the Fuh-ting, Fuh-ngan, and Fung-ngan districts. The quantity of opium produced in those districts is as yet small, and is chiefly for local wants. In the Fuh-ting district the quantity made does not exceed 6 piculs a year; in that of Fuh-ngan about 10 piculs; and in Fung-ngan not more than 4 piculs is the amount of native production in each year. It is used by smokers for mixing with the stronger kinds from India. The consumption of this kind of mixture is confined almost to the poorer classes of the population. Native drug has less potency and is less deleterious than Indian. The native opium that finds its way into consumption at Foochow and the immediate neighbourhood comes from the departments of Wenchow and Taichow, in the adjoining province of Chekiang. The production in those departments is said to amount to about 2,000 piculs annually, but it is not known what proportion reaches Foochow. It passes the opium tax offices on its way to Foochow under the denomination of ghee, although paying duty as opium. This method of evading the penal laws against opium is openly recognised. In 1873 the quantity of

native opium reported to the local government as having paid duty at Hankow was 634.73 piculs; in 1874 it was 1275.30; in 1875, 1600.23; in 1876, 2887.85; and in 1877, 1684.56 piculs. This increase may be due to greater vigilance or more strict supervision over the collection, or to a really increased production of the drug. The native opium sent to Shanghai which paid duty to the Imperial Customs amounted in 1877 to 1107.80 piculs, as against 1696.56 piculs in 1876.

In the district of Kewkiang the native product is but little used, and then only for adulterating Malwa. A little is produced at Ki-an-fu, and at present is all consumed locally.

At Newchang in 1876 2,236 piculs, and in 1877 988 piculs of opium were imported.

Thomas Adkins, H. M. Consul, remarks:—"The very striking difference in the import of opium, as compared with 1876, is due to the increased production of the native drug. It is difficult to obtain any reliable statistics with regard to native opium. There is no "crop" in the sense understood by the Indian Government; and there is no record of the taxation of the article, which reaches its market in the place of production in small parcels, without interference from the officials. The poppy field is winked at for a consideration, and the harvest is soon beyond the reach of the tax-collector. There can be no doubt that the cultivation of poppy is extending in this province. Within a mile of the consulate there were patches of it growing, and, judging from the luxuriance of some of the crops I should say that this soil and climate are quite suitable to its growth. Only one-fifth of the opium used by the Chinaman is foreign—*i.e.*, 80 per cent. is native—and the disproportion is increasing. Unless the Indian Government can reduce the duty on Malwa opium, so as to permit the foreign merchants to lay it down at the open ports, at a cost of 320 to 420 tael per chest it will soon totally cease to be bought by the Chinese in the north.

With regard to the production of opium in regions more distant from this port, it seems that it is growing in most parts of the province of Feng-Tien, in many parts of the province of Kisin, and in a daily increasing area in the southern portion of Eastern Mongolia, notably and for several years in that portion of country which lies on the right bank of the Sungari in the angle formed by the reaches of that river, above and below its junction with the Nonni, east and south-east of Petuna. In Russian Manchuria, in the strip of country lying on the sea-board between the Amoor and Corea, the poppy is not grown, and no opium is allowed to enter that territory."

At Ningpo the season 1877 was a bad one for the opium crop, nevertheless, the production was 50 per cent. more than in 1876. The cultivation is nominally prohibited, and is not openly taxed, but a present is always exacted. Native opium commands about half the price of that which is imported. A small quantity is used in the adulteration of foreign opium, and it is itself much adulterated (frequently to the extent of 20 per cent) with extract of liquorice and the inspissated juice of the sesame. One of the objects of this adulteration is to dilute the morphia which foreign analysis shows to be greatly in excess in the Chekiang drug. It comes to the market in a fluid state, the small earthen jars in which it is sold containing each from 2 to 4 lbs. A market for the sale of the native drug is held at stated periods at one of the gates of this city.

The competition between Indian and other opium promises in the immediate future to be keener than hitherto. By those who can afford to pay for it it will always be preferred, but to all but the comparatively wealthy it will be prohibited by its heavy cost. . . . Unless Indian opium can be put on the market at a lower rate than prevails at present, it will in all probability be driven almost entirely out.

Kwang-si consumes very little Indian opium. It borders on Yunnan, and has long been used to draw its supplies from that province, in addition to which it grows a small quantity within its own territory. The smokers of Kwang-si consequently are all accustomed to the taste of native opium, and are not likely to desert it for the more expensive foreign article. Opium is not grown, nor is Chinese opium used, in Formosa.

Persian Opium.—The consumption of this opium has largely increased at Amoy, which is accounted for by its comparative cheapness. At Ningpo, during a period when

Indian opium fetched a high price, 30 chests of Persian were imported which met with a ready sale at 420 to 435 taels, Indian at that time fetching 675 taels. At Taiwan (Formosa) the importations of opium in 1877 were: in chests, Benares 1,416, Patna 147, Malwa 9, Turkey 2, and Persian 1,279; total, 2,853. The import of Persian in 1876 was 955 cwt., against 1,577 in 1877. This increase, which has been continuous, has been caused by the adoption, at the time of its introduction here some four years ago, instead of Turkey opium, of a lower rate of *li-kin*, or war-tax, on it than that prevailing at the other end of the island; and it is accordingly brought here for conveyance to the North. Persian opium has entirely driven the Turkey sort out of the market, and is much liked by the poor and hardworking class of colonists.

In the island of Taiwan Persian opium is becoming a very serious rival to the Indian drug. This arises not from any general superiority in the opium itself, though the better quality fetches a higher price in the market than average Indian opium, but simply from its cheapness as compared with either Benares or Patna. It is stated that it is smoked chiefly by soldiers stationed on the East coast, unmixed with other opium—not from choice, but necessity. In other parts of the district it is employed to some extent to mix with the different kinds of Indian opium. That this is done for the sake of economy is admitted on all hands, of which the fact that the greatest proportional as well as actual decrease has taken place in the consumption of Patna opium, the most expensive kind, may be taken as additional evidence. There is not the smallest likelihood that Persian opium will ever supplant Indian opium in this market beyond a certain point, but at the same time its consumption will no doubt increase for some time in a higher ratio than that of Indian opium.

"MACMILLAN" ON THE APOTHECARIES.

AN anonymous writer in *Macmillan's Magazine* for January, in an article on "Methods of Sick Relief," narrates at considerable length the recent prosecution of a chemist, in the Court of Exchequer, for counter practice. It need hardly be said that he takes the view which has been universally held by those representatives of the public who have discussed the subject, and it may be added in passing, that this article is one more proof that the public have not considered the subject to be of such "ordinary character" as the clerk of the Apothecaries' Society would have it considered. The writer we now refer to treats the matter as a very serious one indeed, and though in his narration he betrays a curious capacity for blundering, it cannot be said that any one of his mistakes as to facts affects in the smallest degree his general conclusions or his arguments. He is discussing the means possessed by the poor of providing against illnesses, and, after references to hospitals and dispensaries, and their drawbacks, he arrives at the resource which remains of purchasing from the chemist some specific or emollient for sixpence or a shilling. "Yet even this alternative," he says, "the undiscerning revival of a penal law long deemed obsolete would practically take away." After an incorrect summary of the Act of 1815, which the writer seems to think was especially devised as a means of crushing chemists, he continues: "Many harsh and oppressive laws were framed and enacted in the legislative dark ages of Sidmouth and Castlereagh: but a harsher or more impracticable law than this never was devised or passed. Chemists, like other people, are of course justly liable for ill consequences ensuing from the sale to the unwary of articles tending to shorten life, if taken in undue quantities, or at improper times; and no respectable chemist would ask to be exonerated from this responsibility; or, where a customer seemed to require medical examination or treatment, would think of taking upon him the duty of a physician or surgeon. But the immense preponderance of pains and aches that afflict humanity are happily not of this kind. They are casualties of climate, toil, indigestion, and other circumstances affecting everyday life, which a sensible man of decent education in his trade recognises easily as they come before him, and feels no

difficulty in designating as trivial, or at least not dangerous, and as likely to be alleviated by some ordinary specific which experience tells him has relieved many others from pain. Sixpence or a shilling contents him for the innocuous draught or lotion he recommends; and his hard-driven customer blesses him next morning for 'setting him right' and enabling him to go back to his work." The conclusion which this writer arrives at is this: "Let the Government on its own responsibility bring in provisions defining in plain language what is meant by 'prescribing' as contra-distinguished from recommending or offering to sell. Let them forbid, if they please, in definite terms any medical or surgical act, or any number of such acts, as it may be unfit for a chemist to do; and then let a competent Government functionary have the power to inspect and inquire into any alleged breach of the law, and to initiate proceedings, if necessary, as is done under the Factories and Workshops Act. But let us have done with all ambiguities of legal interdict, and with the abomination of spies and informers set to worry and harass a most respectable class of men, who probably do as much good and as little harm to their neighbours in the way of their trade as any other in the community."

CHINESE PHARMACY.

AMONG the pharmaceutical products exhibited at the Paris Exhibition in the Chinese Section were the following:—Bear's gall—a sovereign antidote; Bezoar stones—an infallible panacea; skins of the python—for paralysis and rheumatism; dried fowls' gizzards—as a substitute for pepsine; inner pellicle of eggs—for jaundice; human urinary calculi—for renal complaints; hippocampus (seahorse)—for women in confinement, the woman to hold one in her hand; powdered elephant's skin—rheumatic complaints; fossil bones—for chorea and fever; ashes of roasted grasshoppers—for headache; tincture of scorpions—stimulant; decoction of small green serpents—for skin diseases; tiger's bones in jelly—a costly medicine, said to possess high tonic virtues; inside of a stag's horn—colds and bronchitis; buck's sinews—for rheumatism and sciatica; glue made from asses' skins—enjoys a great reputation as a remedy in lung diseases; the dried excrement of silk worms—for eye diseases; dried earth worms—for secret diseases; toad's mucus—this is prepared by keeping live toads in a vessel half-filled with flour, when the flour is sufficiently impregnated with the slimy excretions of the toads it is separated and dried—this remedy is used in convulsions.

CHEMICAL SOCIETY.

December 19.

DR. GLADSTONE, President, in the chair.

The following papers were read:—

"Researches on the Action of the Copper-Zinc Couple on Organic Bodies," Part IX.; "Preparation of Zinc Methyl," by Dr. Gladstone and Mr. Tribe. During the reading of this paper Dr. Frankland took the chair. Methyl iodide, in contact with the copper-zinc couple, is converted at the ordinary temperature, in from three to 30 days, into a crystalline mass of zinc methiodide. By distillation zinc methyl is obtained; the yield in one case was 99.2 per cent. Dr. Debus made some remarks on the formula of glyoxylic acid. The author considers the formula of this acid to be $C_2H_2O_3$, in opposition to Perkin, who, from quantitative experiments, came to the conclusion that the true formula was $C_2H_2O_4$.

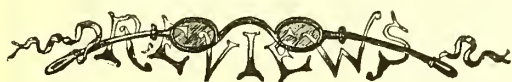
Mr. Wills gave a short communication on "The Production of Oxides of Nitrogen by the Electric Arc in Air." The author finds that nitric acid was formed in four experiments, equivalent to .51, .55, .6, and .7 gramme per hour, and points out the importance of this observation with reference to the proposed use of the electric light in dwellings.

On "The Action of Alkaline Hypobromite on Oxamide, Urea, and Potassium Ferrocyanide," Part II., by W. Foster.

On "Two New Hydrocarbons obtained by the Action of Sodium on Turpentine Hydrochloride," by Dr. Letts. The principal point in this paper is the fact that the author has obtained a solid hydrocarbon, having the formula $C_{10}H_{17}$, which he designates solid turpenyl.

On "The Formation of Baric Periodate," by S. Sugiura and C. F. Cross.

On "Erbium and Yttrium," by T. S. Humpidge and W. Burney. The authors wished to determine the specific heats of these metals, but failed to obtain them in coherent masses. They determined the atomic weight of pure erbium to be 171.61.



AND

Literary Notes.

Bayley's Chemists' Pocket-book.*

THE author of this *rade mecum* is evidently of the opinion that a chemist's pockets are not, as a rule, any too well filled, or he could scarcely expect him to find room for the bulky volume which he has compiled for his use. That when Mr. Bayley conceived the idea of a pocket-book for chemists, he was inspired to supply an undeniable want, we fully admit. But in attempting to collect together in one little manual matter which would be valuable for the daily requirements of the chemist pure and simple, the chemical manufacturer, the metallurgist, the dyer, the distiller, the brewer, the sugar refiner, the photographer, and the student, we are much afraid that the Niagara he essayed to shoot was not one specially designed to reflect credit upon his efforts. A pocket-book, too, is generally supposed to provide ample convenience for the reception of notes and memoranda in general. Mr. Bayley only allows us half-a-dozen blank leaves in a book of more than 400 pages. Many of the tables are exceedingly useful, and not a few are such as can fairly lay claim to be in daily use by a busy chemist. Amongst those worthy of especial commendation are a table of co-efficients, very accurate and complete, tables of boiling-points and solubilities, and a very complete system for converting grains into grammes and *vice versa*. On the other hand, there is a vast deal of matter of a very ill-assorted kind, which tends to considerably swell the volume, and which we shall hope to see expunged in another year's edition. As regards printing and binding, there is nothing to be desired, and those of our readers who may find their pockets rather heavily handicapped by the weight of Mr. Bayley's voluminous production will do well to respond to the hope expressed in the preface, that users of the book will be free with suggestions for improvement, and urge upon the author the necessity of curtailment.

English Folk-lore. By T. F. Thistleton Dyer. Hardwicke & Bogue. 5s.

THIS is one of Bogue's "Half-hour Volumes," handsomely got up, clearly printed on good paper of a handy size. Not one of the series aims at exhausting its subject. To be entertaining, somewhat instructive, and largely suggestive is all they attempt. The present work is a most interesting collection of curious and little-known things. The 280 pages of the book are all of them pleasant reading. There are 13 chapters, treating of plants, the moon, birds, animals, insects and reptiles, charms, birth and baptism, marriage, death, days of the week, the months and their weather lore, bells, and miscellaneous folk-lore. Every chapter convinces us that the writer would have found it far easier to extend it than to restrain his pen within the narrow limits assigned to him. Anyone who has paid a little attention to the subject will be able to add many facts to those mentioned here, but at the same time he will learn much more that is quite new to him.

* *A Pocket-book for Chemists, &c.* By Thomas Bayley, Assoc. R.C.Sc.I., &c., &c. London: E & F. N. Spon. 5s.

Much of the medical treatment adopted by the populace owes its origin to "folk-lore," and it is very difficult to separate the real properties of plants from those assigned to them by tradition. "In some parts of Lincolnshire it is believed that cork has the power of keeping off the cramp." "In Cornwall the club moss (*Lycopodium inundatum*), if properly gathered, is considered good against all diseases of the eye." It is boiled in spring-water and used as a fomentation, and there seems no reason, setting aside the "proper gathering," why it should not be useful in certain cases. "Gerard tells us that ivy 'leaves, laid in steepe in water for a day and a night's space, helpe sore and smarting waterish eyes if they be bathed and washed with the water wherein they have been infused.'" This seems at least possible; but we also learn that "in the county of Salop children affected with whooping cough are allowed to drink all they require out of drinking-cups made from the wood of the common ivy, this being considered an infallible remedy." Ivy wood is white and quite tasteless. On page 147 we read, "There is an irritating herpetic disease which, like a girdle, gradually encircles the body, whence its English name of 'shingles' (Latin *cingulum*). 'By an imagination not difficult to understand,' says Mr. Tylor, 'the disease is attributed to a sort of coiling snake; and I remember a case in Cornwall where a girl's family waited in great fear to see if the creature would stretch all round her, the belief being that if the snake's head and tail met the patient would die.'" We have met with this superstition among highly intelligent and cultivated people.

"In the neighbourhood of Banbury, in Oxfordshire, the rain which may happen to fall on Holy Thursday is carefully preserved and bottled as a specific remedy for sore eyes." In Somersetshire it is said that the ring-finger stroked along any sore or wound will soon heal it. All the other fingers are poisonous, especially the forefinger.

The specimens quoted are a fair sample of the information with which the book is crammed. We have long been of opinion that the chemist, especially when his business is in the provinces, should know something of folk-lore, to enable him to deal intelligently with a section of his customers. This little book, with the numerous references it contains, forms an excellent introduction to the study.

We have noted only two misprints. On page 21 *Lycopodium "mundatum"* should be "*inundatum*." On page 254 *garlic* should be *bears' garlic*, or *Allium ursinum* L.

Glossary of Biological, Anatomical, and Physiological Terms. By Thomas Dunman. Published by Griffith & Farran, 1879 (pp. vi., 161).

Dictionary of Scientific Terms (Illustrated). By William Rossiter. Published by William Collins, Sons & Co., 1879 (pp. 350 and two pages of tables.)

Dictionary of English Plant Names. By James Britten, F.L.S., and Robert Holland. Part I. Published for the English Dialect Society by Trübner & Co., 1878. (pp. xii., 28, and 197.) Price 8s. 6d.

MR. DUNMAN is lecturer on "Physiology" at the Birkbeck Institution, and on "Physical Science" at the Working Men's College. His experience of students but little acquainted with Latin and Greek, a class which is rapidly increasing, seems to have had much influence on the form of his book. It contains about 3,000 words not found in ordinary dictionaries, but which are used in the works of the best-known modern writers on physiology, anatomy, and biology. It seems to be carefully compiled, and it will doubtless be useful to the class to whom it is addressed.

Rossiter's "Dictionary" is of a very different stamp. It is addressed to the public. It contains about 14,000 entries, and is intended "as a guide to the understanding of our popular and scientific literature." Under the letter "A," which fills 38 pages, we find 26 engravings. Some of them are very well chosen, but there are figures of the adder, albatross, ape, armadillo, Armstrong gun, and asp. These are all of them familiar to the public, and the asp and the adder might be mistaken for each other. The crocodile on another page is very much like the alligator, but its tail is curved in the opposite direction, probably for distinction. We think it is a pity that less commonly known things were not chosen for illustration.

There are 30 head lines on the first page. The first and

second are "aardvark" and "aardwolf," which are defined respectively as an ant-eating and a foxlike quadruped of South Africa, with their Latin names following. The third is "Aaron's beard"—*Hypericum Calycinum*, an undershrub belonging to Hypericaceae." Firstly, we do not think the general reader will be much the wiser after reading this definition. Secondly, the name "Aaron's beard" is applied to five perfectly distinct plants, of which *Hypericum Calycinum* is only one. The articles on "Abacus," "Abatis," and "Abbeville flints" contain intelligible information. We next read "abdar" process for separating silver from any copper ore in which it occurs." It is quite certain that if anyone referred to this book for information on the abdar process he would want to know of what it consisted. The context would inevitably tell him all that is given here.

"Abdomen" and "abdominales" are passable, but we do not feel our stock of knowledge increased after reading "abdominalia." 1. A sub-division of "ascidioida" (*Molluscoida*), in which the branchial sac is small in front. 2. A sub-division of "cirripedia" (*Articulata*). The next article is "abele." As the etymology of are given *L. Abies*, *D. Abech*. The letters L and D mean Latin and Dutch, though the abbreviations are nowhere explained. But the idea of connecting the Latin *Abies* with the English abele is simply absurd. The definition is as follows:—"Abel tree, white poplar, *Populus alba*, Dutch beech. A common European tree about 80 feet high." The word "Abel tree" is not English. It is an unnecessary invention of the author's. The other synonyms are correct.

We have not space to follow the author even through the first page. The book is probably as good as most of its kind, which is not high praise.

Britten and Holland's "English Plant Names" is a work of a far higher class than either of the preceding. It has been issued to the subscribers to the English Dialect Society within the past fortnight, and may be purchased by the general public of Messrs. Trübner & Co.

To a mind fond of literature there is almost as much pleasure in turning over a work like this as in examining a painting by one of the great masters. The impression of constant care and self restraint, minute attention to details, and, above all, of completeness, is left as much by one as the other.

Part I, now before us, contains a list of the English names of English plants, which are registered alphabetically between A and F inclusive. There are nearly 3,000 names enumerated, followed by the botanical titles of the plants known by them, with references to authorities, books, and places for each one, and in many cases short but remarkably valuable explanatory and illustrative notes. Following the Introduction is an index. This contains, in alphabetical order, the botanical names of all the British plants mentioned in the body of the work, followed in each case by all its English names which commence with either of the first six letters of the alphabet. To illustrate the scope of the work and the immense number of plant names contained in the English language and dialects, we quote the two following examples. The first gives the names of the common daisy, and is from page 4 of the Index:—

BELLIS PERENNIS, L. Bachelors' Buttons, Baimwort, Banwood, Banwort, Bennergowan, Bennert, Bennet, Beauwort, Bessy-Banwood, Billy Button, Bonellower, Bonwort, Briswort, Bruisewort, Cat-posy, Cockiloorie, Comfrey, Conferly, Consound (Less), Cumfrie, Daiseygyhe, Daisy, Daisy (Dog, Shepherds', Small, or The Children's), Dazeg, Dicky Daisy, Ewe Gowan.

The daisy is not by any means the most polynomous plant in our flora.

On page 6 of the Dictionary we read:—

ADDER'S TONGUE, (1) *Ophioglossum vulgatum*, L., Turn. Names, Hal. Wr., "Because out of every leaf it sendeth forth a kind of Pestal, like unto an adder's tongue; it cureth the biting of serpents."—(Cole's "Adam in Eden," p. 558-59; Prior, p. 2; (2) *Orchis mascula*, L., Mid. Ches.; (3) *Arum maculatum*, L., Cornw.; (4) *Geranium Robertianum*, L., Ess.; (5) *Sagittaria sagittifolia*, L., Nennich; (6) *Matanthemum bifolium*, D.C., Nennich.

These botanical terms may not be familiar to some. (1) Is the fern commonly known as the adder's tongue; (2) is one of the common wild orchises; (3) is the wild arum, or lords and ladies; (4) is a wild geranium commonly called Herb Robert; (5) is the arrowhead, a water-plant;

and (6) is a small flower sometimes called maylily. We have never examined anything which approaches this work in completeness, in ease of reference, and in the care which has been taken to render it as valuable as possible. It is emphatically a work that will live, if not in itself, yet in other books whose reputation it will help to make. The English Dialect Society, which has published it, is probably unknown to most chemists. Its aim is to collect and record the dialects of the English language before they are destroyed by education, and to publish works illustrative of the history of our language. The subscription is a guinea a year, in return for which subscribers for the past year received works published at 27s., those in 1877 works worth 28s. 6d. It is a society worthy the support of all intelligent Englishmen, and we should be glad if these few words induced any of our readers to join it. The only formality necessary to become a member is to pay your subscription to J. H. Nodal, Esq., Hon. Sec., The Grange, Heaton Moor, near Stockport. Works published in previous years can be obtained by paying the subscription for that year.

Medical pamphlets are always flying about in abundance. Among some received this month we may mention the following:—

"Alcohol in some Clinical Aspects." By Godwin Timms, M.D. This is a reprint from the *Medical Press and Circular*. The author opens with the striking assertion that to alcohol may be unquestionably attributed more deaths than to all the rest of the poisons, while on the other hand it saves more lives than any other remedy. The rest of the essay contains a few interesting cases, but nothing particularly new.

Another pamphlet contains a paper read by Dr. C. H. F. Routh, of London, before the Obstetrical Section of the British Medical Association last August, with the discussion that followed on "the moral and physical evils likely to follow if practices intended to act as checks to population be not strongly discouraged and condemned." The paper and the discussion expressed the strongest abhorrence of such practices as those of which Mrs. Besant has thought fit to make herself the apostle; and Dr. McClintock, of Dublin, Dr. Henry Bennet, of Mentone, and Dr. Marion Sims, of New York, were among the speakers who united in condemnation of them.



DETERMINING ORGANIC MATTERS CONTAINED IN SOLUTION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I find recorded in your last issue that Messrs. Wanklyn & Cooper have patented a process for determining organic matters contained in solution, dated 1878. I beg to call the attention of your readers, for our mutual safety, to page 259 of *THE CHEMIST AND DRUGGIST*, 1877, where there is a section devoted by me to the estimation of organic acids and their salts in solution by means of a boiling solution of potassium permanganate. I myself fail to see, earnestly as I desire that chemists should receive the rewards of their labour, that mere alkalinity in preference to acidity in one part of a chemical analysis can constitute a real property or exclusive right.

I had intended to develop the capacity of the permanent process as a test, under various conditions of time, temperature, alkalinity, &c.; but circumstances, as you know, sir, prevented me. Under these different conditions I have for a long time expected to find differences in the sorts of organic matter, and this difference must be decided before any process of water analysis can have a precise or specific value.

All that the chemist can do, perhaps, will be to discover the conditions favourable to the presence of the germs of

disease. It will probably be for the microscopist to point out what those disease germs are.

I am, sir, yours faithfully,
J. BARKER SMITH.

Dulwich, January 6, 1879.

KIND WORDS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—The firm of which I am a member have been for a number of years subscribers to THE CHEMIST AND DRUGGIST, and I have been a constant reader of it. I want to tell you that I think it is one of the best of the trade journals that I am acquainted with. I never saw any other publication in which the advertisements were displayed in such a readable and taking way as they are in THE CHEMIST AND DRUGGIST. I always look through the advertisements before I read the other matter. The reading matter is always very desirable, and of great use both in the "trade" and the "scientific" direction.

The DIARY I prize highly. The number for 1879, just received, looks particularly inviting.

I hope your subscription list may constantly increase, as it certainly deserves to as long as you continue to publish so valuable a journal. I enclose subscription for T. M. & Co. for 1879, and, with the compliments of the season,

I am, yours very truly,
THOMAS DOLIBER.

(Theodore Metcalf & Co., Boston, U.S.)
Boston, U.S., December 11, 1878.

SHALL WE COMPROMISE WITH THE APOTHECARIES' SOCIETY?

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—The gist of Mr. Phillip's letter, contained in your last issue, may be summed up in one word—"Compromise"; and as this is also the line of action adopted by the "Square," it may not be out of place to say a few words thereon. In the first place this recommendation appears to me now to be behind time: like Chesterfield's patronage of Dr. Johnson—it comes too late. Moreover, it seems to be forgotten that the Medical Defence Association took its rise not a hundred miles from Ratcliffe Highway, and I fail to see the use of appealing to the men of Burlington House, who never have been against us. Unfortunately, it is not the head but the tail of the profession that we have to deal with. True, the Apothecaries' Society and the leading medical journal are on their side, simply because they understand what warfare is; naturally they say, "Who will the men fight under if their leaders are against them?" But, taken at its highest, what does this counsel amount to? Simply that we should toady to medical men. Surely there's enough of that already. It may be that toadyism begets patronage, but I trust the trade deserves something more than this. I apprehend we want freedom and right—two such priceless jewels that they have to be fought for in our law courts—and I hope the trade is not willing to make the Apothecaries' Society our great law-givers. Mr. Phillips is quite right in saying that the trade and the medical profession should go hand-in-hand for the common good; but if pharmacy is to be elevated it must become, not more dependent, but more self-reliant. If she is to become the great handmaid to medicine she ought to be, she must do something more than be for ever leaning upon and taking inspiration from medical men, and first of all we must establish our rights, whatever they may be, and keep clearly within them, and then, perhaps, the trade may pursue its paths in peace. We must erect, if not a scientific, at least a legal, frontier. Is the trade, forsooth, to go to the Apothecaries' Society, after all this worrying jealousy, and ask them how far they are willing to let out the string? Talk about harassed interests! Why, the trade has become a complete shuttlecock for every one to have a fling at. Now it is the public

analyst, again the Excise officer, anon the common informer; and is a whole class of educated, honourable men to be pounced down upon, like dead carcasses, by the devouring eagles? No, sir; we must entrench ourselves behind some secure barrier, and, as Abraham Lincoln would say, "There's nothing now in the way but the doing of it;" and as that clear-minded man could give no more profound advice in the darkest hour of his country's history than "to keep pegging away," so it may be that the trade will act wisely by fighting on and showing the apothecaries that they are foemen worthy of their steel, and, if needs be we must die, to die hard, and not upon our knees.

Your obedient servant,
S. G.

THE FOILING OF THE ASSOCIOS.*

The Associos came down like a wolf on the fold,
Where the Pharmacutios were guarding the gold;
And the roar of their throats was like "studs" on the spree,
When the Oxford disgorges towards Bloomsburie.

Like aught that you know which by nature is green,
That host with their leaders that morning were seen;
Like anything else done entirely brown,
That host later on could but stammer and frown.

For the Demon of Law spread his brief on the baize,
And breathed in their faces the facts of the case.
In a voice that was stony, with words that were chill,
With three Counsels' opinion, he bade them be still.
And Gabriel's defender his mouth opened wide,
But through it there rolled not the breath of his pride,
For his lips spoke soft peace in mellifluous tones,
Whilst his heart it was racking to cover his moans.

And Birmingham sat there, distracted and pale;
With the dew on his brow, he sat biting his nail;
His following not silent; the Council alone,
Mens consilii recti, with dignity shone.

The deluded Associos were loud in their wail,
For the pranks of their leaders did nothing avail;
And the gold that they came for remained in the fold
With the Pharmacutios, they thought to have sold.

GABRIEL'S GRANDFATHER.

Bankruptcies and Liquidations.

WILLIAM BEATSON, Chemical Manufacturer, Rotherham.

ANOTHER case arising from the liquidation of Mr. Beatson has occupied the Court of Chancery during the past month. On December 12 the Sheffield and South Yorkshire Building Society, by their counsel, moved in the Chancery Division of the High Court of Justice, before the Master of the Rolls, for a receiver in an action against Mr. Kinder and others. This was an action brought by the plaintiffs, who were first mortgagees of some chemical works which were mortgaged by Mr. Beatson for the trustees of the society in 1870 for 8,000*l.*, payable in the usual way by monthly instalments spread over ten years. The mortgage contained the usual power to enter upon default in any month's payment, and to appoint their own receiver. The plaintiffs therefore represented the trustees of the society; Mr. Beatson was a liquidating debtor, and Mr. Kinder had been appointed receiver. Mr. Mycock, who had entered into partnership with Beatson, had instituted an action against him the day before the liquidation proceedings by Beatson, and had obtained the appointment of a receiver in that action. His title, therefore, was subject to the title of the plaintiffs. When the four months had expired before November 11 of the past year, a person was sent on behalf of the receiver to take possession, but when they saw the order of the plaintiffs in this case they withdrew. As all the parties were before the Court now, plaintiffs' counsel asked for the appointment of a receiver on the part of the society.

A Mr. Perrott had given a collateral security for a portion of the debt owing to the society. After some discussion,

* With pleasure we make room for a paean from the other side. That the Conservative party should come out with an epic on the contest of January 9 is a credit to their cheerfulness.

the Judge appointed a receiver for all the property except the chemical works, the plaintiffs to be responsible for his receipts, and the receiver to be paid salary in the usual way, but without security. On the first day of Hilary sittings plaintiffs are to decide whether they will take a transfer of the mortgage or substitute some other receiver.

WILLIAM KOPPELL, Bradford.

At a recent meeting of the creditors of William Koppell, manufacturing chemist, Bradford, it was shown that the liabilities were 2,235*l.* 10*s.* 9*d.*, and the assets 409*l.* 5*s.* 4*d.* It was resolved to wind up in liquidation, with a trustee and committee.

JOHN LOMAS & Co., Newcastle.

A LENGTHENED report has been issued of the affairs of John Lomas & Co. From the document it would appear that the liabilities are 49,000*l.*; the assets, 5,000*l.* The loss over four years' transactions is reckoned at 60*l.* per week; for, in addition to the money lost upon the trading account, the called-up capital of between 80,000*l.* and 90,000*l.* is sunk.

NURSEY, KESSOWJEE & Co., Opium Factors, Bombay.

PRIVATE telegrams received in London announce the failure of Messrs. Nursey, Kessowjee & Co., of Bombay, who are engaged in the opium trade. The transactions of this firm were occasionally very large, but the extent of the liabilities does not appear to be at present known.

PARKER & AMISS, Manufacturing Chemists, Old Ford.

AN adjourned meeting for public examination was held in this case last month before Mr. Registrar Hazlitt. The bankrupts furnished a joint statement of affairs showing unsecured debts 1,399*l.*, and debts for which security is held 100*l.*, against assets 386*l.* On behalf of the trustee it was stated that negotiations had taken place with the creditors with the object of superseding the bankruptcy, but the arrangement had fallen through. There was no opposition to the bankrupts passing their examination. The bankrupts passed accordingly.

WILLIAM WILKINSON, Chemist and Druggist, Chesterfield.

A PETITION for liquidation has been filed in the Chesterfield County Court by Mr. Cutts on behalf of William Wilkinson, chemist and druggist, Gluman Gate. The liabilities are estimated at 1,000*l.* An application was made before the Judge at the County Court for the appointment of Mr. Lander as receiver, and the application was granted.

Medical Cleanings.

SIR HENRY THOMPSON, who stands at the head of the surgical profession in London, says the *Philadelphia Medical and Surgical Reporter*, is said to take a peremptory tone with his patients, and to refuse to attend such as will not, for a period which he prescribes, put themselves on a platform of the strictest temperance. This is so pointed out by the nature of many surgical cases that it scarcely needs a comment; but it serves to show how a great doctor can lay down the law of hygienic living, and have it enforced—or quit the case.

DR. MARY WALKER is not a favourite with the medical profession in the United States. One of their organs reports that she was walking down Broadway in her peculiar attire, and was followed by such a crowd that a policeman took her to head-quarters. Superintendent Walling proposed to release her, and the officer was about to explain that she was a woman in male attire, when the prisoner inquired, "How does he know that I'm a woman?" This was too much for the officer, and the charge was withdrawn.

TOMATOES AND CANCER.—*Le Journal d'Hygiène* states that a doctor of Philadelphia has discovered vast numbers of cancer cells in the substance of the tomato.

A SURE AND RAPID CURE FOR HICCUGH.—Dr. Grellet, of Viehy, states that he has never failed in immediately relieving simple hiccough by administering a lump of sugar soaked with vinegar.—*Révue Méd.*, Dec. 16.

MEDICAL INDEX.—Dr. John J. Billings, who has charge of the National Medical Library, Washington, U.S., has prepared an index of universal medical literature, including over 400,000 subject entries, and requiring 10 volumes royal octavo of 1,000 pages each. It is expected that the United States Government will grant an appropriation for the publication of this most valuable work. In that case Dr. Billings and Dr. Robert Fletcher will continue the work of indexing all contemporary medical literature by the publication of a periodical to be called the *Index Medicus*.

MARTYRS TO DUTY.—The New Orleans *Medical and Surgical Journal* publishes a list of no less than 134 members of the medical profession who sacrificed their lives in the truly honourable discharge of their terrible duties during the epidemic which ravaged some of the Southern States of America in August, September, and October of last year. No less than 36 of these were volunteers from other States. The American medical profession owes to these fallen comrades some worthy recognition, for by their devotion the rest are raised higher in the world's estimation.

THE HOMŒOPATHIC REVIEW in an interesting sketch of the late Dr. Quin confirms the statement that he was chosen at the age of 21 by Lord Liverpool to be the medical attendant of Napoleon Bonaparte at St. Helena! The same journal records that Quin having applied for admission to the Athenæum Club, Dr. Paris, the President of the College of Physicians, declared in insulting terms that he would have him blackballed. Next day a noble friend of Quin's called on Paris to demand an apology. This being refused, a duel was suggested as the alternative. Dr. Paris, however, submitted to the terms rather than fight, and thus a splendid opportunity was lost of testing the relative merits of homœopathy and allopathy in regard to the killing, if not the curing, abilities of their champions.

THE OPIUM HABIT.—A correspondent of the *New York Times*, who professes to have been cured of the opium habit at the New York State Inebriate Asylum, says that no drug can take the place of opium, and that those persons who profess to cure the opium habit by giving a substitute are mostly charlatans. He was not entirely deprived of the accustomed stimulant at once, but was allowed a small portion for two weeks in daily decreasing doses. After the opium had been abandoned he was given belladonna by day and hydrate of chloral at night. The chloral was to induce sleep; this was reduced from what would be equivalent to about thirty grains of the salt, until at the end of the month it was nothing at all. By this time he could sleep without it. He was cured in a month, and in the two months he remained there afterwards gained in weight twenty pounds.

WALKING FEVERS.—Among the fearful scenes during the recent yellow fever epidemic in the Southern States of America, none were more melancholy than what were called "walking cases." The term is a technical one, understood in yellow fever districts. A "walking case" is a patient who refuses to go to bed, and keeps his feet until he drops dead. Sometimes the "walking" is confined to the patient's chamber, and then again he roams the streets, with the seal of death on his brow, the dreadful black vomit oozing from his lips—an object of horror to all whom he encounters. One case reported—in an earlier epidemic—was a man of splendid physique and handsome presence, but an unfortunate love affair had made him reckless. He developed a "walking case" of yellow fever, and for two days and nights roamed the streets and frequented the drinking houses of the city, in spite of all his friends could do, finally falling on the street, and dying before he could be conveyed to his lodgings. He would wipe the black vomit from his lips, hold up the handkerchief, critically examine the horrible exudation, and remark with grim humour that his "coffee" didn't agree with him that morning.

Foreign Items.

CHINESE DRUG STORES.—There are 434 Chinese business houses in San Francisco, and 25 of these are druggists.

DR. PIERCE, the proprietor of Pierce's Family Medicines, has been again elected to Congress by the city of Buffalo, N.Y., by a majority of 3,000.

ANTIMONY.—A deposit of antimony sulphide has been found near Greymouth, New Zealand, and the analysis gives 84 oz. of gold and 36 oz. of silver to the ton.

THE "Revaldescière du Barry" has had an immense success in France, especially since it cured, or claimed to have cured, the late Pope. How far it is connected with the "Revalenta" of British fame we are not quite sure. Mr. Klug, a Prussian Jew, is the principal of the Paris house, and he recently brought an action against a M. Belle, of Tavari, who was making and selling a *Nouvelle Revaldescière de Beuserade*. The action has caused quite an interest in Paris, chiefly for the reason that a number of eminent counsel were engaged. Klug modestly demanded 400,000f. damages; the Court gave him 1,000f.

PHOSPHATES IN THE WEST INDIES.—A company has been registered under the title "Alliance Phosphate," with a capital of 30,000*l.* in 10*l.* shares, for the purpose of acquiring and working beds of phosphate of lime and other phosphatic substances, and any mineral products and substances, in the West Indies or elsewhere.

QUININE IN THE UNITED STATES.—The following Bill has been introduced into the United States House of Representatives by Mr. Morrison:—"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That on and after the passage of this Act sulphate of quinine imported from foreign countries shall be admitted free of duty.

A GIANT TREE.—A patriarch of the forest has been lately felled in California, and the greater portion of the wood taken to San Francisco. It was known by the epithet of "Old Moses." If one might infer with accuracy its age from the number of its rings, its must have been 4,840 years old. Its capacity is said to have been so great that 300 persons could find room within its trunk.

Obituary.

BIRD.—On December 15, 1878, at Birmingham, Mr. Alfred Bird, the head of the firm of Alfred Bird & Sons, Worcester Street, Birmingham. Aged 67 years.

Mr. Bird was a practical chemist of considerable reputation in the Midland district. He took a very active part in the defence of one of the noted milk of sulphur cases some two years ago, and he assisted in the formation of the Chemists' Trade Association. He was a member of the Pharmaceutical Society, and besides a retail business he had established a large and important manufacturing concern, and his firm lately successfully defended a prosecution for the sale of violet powder which was not pure starch.

EVANS.—On December 1, 1878, Mr. John Evans, chemist and druggist, Bethesda. Aged 35.

POGMORE.—On December 14, 1878, Mr. John Pogmore, chemist and druggist, Leigh, Lancashire. Aged 57.

FOSTER.—On January 3, Eliza Louisa Foster, the beloved wife of Alfred Hood Foster, chemist, Navigation Street, Birmingham. Aged 60.

FULLEYLOVE, Mr. JAMES.—The age given last month (47 years) should have been 42.

GALLARD.—On November 30, 1878, Mr. William Gallard, chemist and druggist, Child's Hill, Hendon. Aged 65.

LYMAN.—On the 5th, at Toronto, Canada, Benjamin Lyman, Esq., of Montreal, aged 68.

PATERSON.—On November 19, 1878, Mr. John Paterson, chemist and druggist, Victoria Park. Aged 58.

POWERS.—Thomas H. Powers, of the well-known firm of Powers & Weightman, manufacturing chemists, died sud-

denly, at his late residence, No. 1618 Walnut Street, Philadelphia, on November 20. He was a native of Philadelphia, and was in the 67th year of his age.

For 42 years he had been connected with the manufacture of chemicals in the United States, and since 1847 the firm of Powers & Weightman has been at the head of the industry. An illustration of his character is furnished by the *Philadelphia Ledger*. "During the yellow fever epidemic, which caused a sudden and great demand for quinine, the importers of that necessary drug at once advanced the price a dollar and a half and a half an ounce. Mr. Powers, on the other hand, and on all similar occasions, declined to sell quinine to speculative purchasers, but furnished to his old customers at the old rates, and it may be said generally that no hope of gain ever tempted him to take advantage of a public necessity." He leaves a large estate, estimated at several millions of dollars, and every section of the trade in America has joined in public expressions of sorrow at his loss.

ROBERTSON.—On December 16, Mr. James Robertson, of 35 George Street, Edinburgh. Aged 79. Mr. Robertson was both a pharmaceutical chemist and a licentiate of the College of Surgeons. He had been, in 1858, President of the North British branch of the Pharmaceutical Society, and at the time of his death he was the oldest chemist in Edinburgh.

SINCLAIR.—On October 5, 1878, Mr. George Fisher Sinclair, chemist and druggist, High Street, Dumfries. Aged 36.

WIGGINS.—On January 7, 1879, Mr. John Wiggins, F.C.S., pharmaceutical chemist, St. Matthew's, Ipswich.

Mr. Wiggins who had for many years taken a prominent part in Ipswich local affairs had been in business there for about 35 years. He was apprenticed with Mr. Catling, of Ely, and afterwards came to Ipswich as assistant to Mr. Harmer (now Mr. Sharp's) in Northgate Street. He was zealous in politics on the Conservative side, but his good humour made him a favourite with both parties. He was one of the founders of the Pharmaceutical Society, and had been for some years a fellow of the Chemical Society, and an honorary member of the Royal Society. He was also till the time of his death Gas Inspector to the borough of Ipswich, and public analyst under the Adulteration of Foods Act for Suffolk and the boroughs of Ipswich, Colchester, and Bury St. Edmunds. He leaves a widow and seven children.

WATERTON.—On November 23, 1878, Mr. William Henry Waterton, chemist and druggist, Darnall. Aged 33.

WRIGHT.—On December 12, 1878, Mr. George Wright, chemist and druggist, Birmingham. Aged 56.

Trade Notes.

MR. LEWIS FRY, the new M.P. for Bristol, is not a member of the eminent firm of chocolate makers, though he belongs to the same family. He is the head of a firm of solicitors.

WE have received a new and very complete catalogue of brushes of all varieties, from the eminent makers, Messrs. G. B. Kent & Co., of Great Marlborough Street.

MESSRS. M. JACKSON & Co., of Barbican, are now supplying complete sets of electric light apparatus at prices from 5*l.* upwards. A 10*l.* set is worked by a 30-cell battery, and is capable of lighting up brilliantly a moderate-sized room or shop.

THE RIGHT TO MANUFACTURE Warren's Amatto, Warren's Rennet, and other specialties well known in Ireland, are offered for sale by tender in our advertisement pages, as well as the stock-in-trade and lease of premises of Messrs. Warren & Stokes, manufacturing chemists, 4 Beresford Place, Dublin.

WE have received Messrs. T. P. Wood & Co.'s Chesterfield Almanack for 1879. It contains between 200 and 300 pages of reading matter, among which is much information of a very useful character. It is not sold, but given to customers of the firm.

* *

MR. JAMES MARSON, of Greengate Street, Stafford, has taken his son, Mr. William Marson, into partnership, and has opened a branch establishment in the Marston Road, Stafford.—MR. L. B. Bryant, of Alford, has disposed of his business to Mr. Richardson.

* *

MR. NATALI, shop fitter, announces his removal into more extensive premises at 207 Old Street, where he is better able to display his stock. He complains that he owes all the trouble of moving into these larger premises to the insertion of a series of advertisements in this journal.

* *

WE have received a handsome price-list of druggists' sundries from Messrs. Allen, Pearce & Co., of Bath Street, Bristol, who have largely extended an old-established business within the past year or two. A special feature of this catalogue is a collection of specimens of lithographed medical labels, prescription envelopes, counter bills, &c., which is a department of Messrs. Allen, Pearce & Co.'s business.

* *

THE CLERGY CO-OPERATIVE STORES.—A Carlisle grocer has written to the Honorary Canon of Carlisle, one of the directors of the above "society," reminding him that "there is little affinity between salvation and soft soap, and a deal of difference between chanting the *Te Deum* and retailing treacle." He hints that the rest of mankind might work the clerical business on co-operative principles at a lower price than it is at present done for.

* *

OUR ADVERTISEMENT PAGES contain sketches of the new dispensing department designed and constructed by Mr. S. Howlett, shop fitter, under the direction of Mr. Martindale, for the examination-room of the Pharmaceutical Society. It is of course without any unnecessary ornament, but the available space has been made excellent use of both at the counter and immediately behind the dispenser. The description given in the advertisement may furnish some useful hints.

* *

MESSRS. ROBINSON & SONS, manufacturers of lints, cotton wools, and bandages, of Chesterfield, have removed their London offices from Bouverie Street to 55 Fann Street, Aldersgate Street, E.C. This firm exhibited a collection of lints at the Paris Exhibition, which won the high approbation of many authorities, and we believe has brought Messrs. Robinson & Sons some good orders from French hospitals. The highest quality has a peculiarly silky appearance, and all are entirely free from irritating chemicals.

* *

WE recently referred to a limited company established for the purpose of supplying shareholding chemists with aerated waters at the uniform rate of 10s. per gross. Since the organisation of this company another has come forward, under the title of The Metropolitan Aerated Water Company (Limited). This is especially intended to supply licensed victuallers and others who may become shareholders with mineral and aerated waters at the uniform rate of 1s. per dozen. This scheme is, in point of fact, the conversion of the business of Messrs. Hamilton & Co., Castle Street, Leicester Square, into a limited company.

BRANSON'S COFFEE EXTRACT, or *Caféine*, is a preparation which deserves a cordial recommendation. The makers have, we think, completely succeeded in the invention of a concentrated coffee essence which exactly reproduces the flavour of the best coffee without any trace of that slight sourness which we have noticed in most of the preparations of a similar character which we have tasted. With boiling water and hot milk it gives a coffee superior in aroma to most of that made direct from the berries. The makers guarantee that, if kept well corked, no climate will affect its properties.

* *

MR. T. LYNCH (Lynch & Co., druggists' sundriesmen, Aldersgate Street) has taken into partnership Mr. L. D. Cohen. The firm will be continued under the old style. One of our pleasantest festivities last Christmas-time was a dinner held at Mr. Lynch's private house, attended by about twenty members of his staff and some half-dozen outsiders, to celebrate the new start. If Mr. Cohen's latent energy should be on a level with that which has been shown by the senior partner since the original establishment of the business some ten years ago, it would hardly be safe to predict the limits to which the firm may extend.

* *

RIMMEL'S stock of perfumed valentines is noticeable again especially for the "practical valentines," which present some pretty ornament or jewel in the form necessary for valentinarian adoption. The idea of following the characteristic jewellery of various nations is well worked out. Thus there are the Roumanian, a sparkling brooch; the Caledonian, a Scotch pebble brooch or pin; the Hibernian, bog oak ornaments; the Belgian, Spa wood; the Cypriote, silver filigree earrings, and so on. These are, of course, in addition to the almost unlimited stock of 6d. and 1s. humorous or delicately fanciful valentines, all exquisitely scented and generally produced with much artistic taste.

* *

ONE would have thought that the hard times would have told on the perfumery trade more quickly than on most others, but on talking the other day with one of the principals in the firm of Low, Son & Haydon we were informed their sales of perfumes, flower extracts, and such articles had greatly increased during the past year. This good result, we ventured to suggest, was no doubt due to the "uniform excellence of quality" which they maintained for their products, and the reduction in price which they had effected. Not to be outdone in politeness, they were good enough to reply that they also attributed some of their success to their advertisements in this journal, and, as a proof that they meant what they said, they followed this remark with an order for twice as much advertising in 1879 as they did with us in 1878.

* *

SOME VERY FINE VIRGINIAN TOBACCOS and cigarettes from the factory of Messrs. J. F. Allen & Co., of Richmond, U.S., have lately been introduced to the notice of London smokers by Messrs. Henry K. Terry & Co., of Great Russell Street Buildings. Gigantic placards representing a gentleman in full enjoyment of the weed, and evidently at peace with all the world and contented with himself, have for some time decorated our vacant wall space. Messrs. Terry & Co. offer through our columns the agency for their cigarettes and packet tobacco to chemists and druggists, and those who can make room for them will find these very satisfactory articles to deal in. The prices are higher than those of ordinary cigarettes and tobaccos, but these possess a delicate flavour seldom met with, and will certainly be appreciated by all

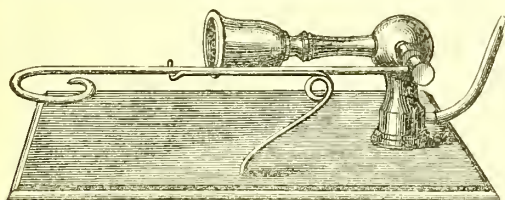
connoisseurs. Some of the cigarettes are supplied in pretty little leatherette cases for the pocket, holding 20 pieces, and retailing for 1s. 6d. each case. We have also received from Messrs. H. K. Terry & Co. an interesting pamphlet, entitled "What do we Smoke?"

* *

ALLEN'S PORTABLE TURKISH BATH and the Turkish bath itself should be better known than they are at present. Many men, and a much larger number of women, know the thing only by name. No one who has once experienced the luxury will be content to live long without it, and when circumstances make unattainable the services of a properly-fitted establishment and of professional shampooers, the apparatus made by Messrs. Allen & Sons seems to be just what is wanted. The portable Turkish bath can be used, too, for hot air alone, for hot air and vapour, and for medicated baths. It can be used under a chair, or applied to a patient while in bed, or used for topical applications. The original cost is only 30s., and the expense of each bath is about 3d. Even Messrs. Allen would not say it will provide as good a bath as that attainable at regular establishments, but it seems a very good and cheap substitute.

* *

THE "CACHETEUR," which is shown in the accompanying drawing, is a French invention, for which Messrs. W. F. Hunt & Co., of Little Windmill Street (the makers of the pleated-paper bottle caps), are the English agents. A tiny



jet of gas is protected by a brass bell, and when the hand is rested on the lever, the jet is shot out, so that sealing-wax can be melted. It appears to us that the jet should be more raised from the metal plate, so that a bottle could be stood beneath it.

* *

FAILURES.—The total number of failures recorded in 1878 was 15,059, while in 1877 the total was 11,022. There are few trades which have not been affected by the long-continued depression of which these failures are very conclusive evidence. A classified list has been prepared by Mr. Richard Seyd, the total being divided between 135 professional men and traders. Of these, in only 23 cases the figures for 1878 compare favourably with those for 1877, and these are such instances as cab-drivers, clerks in holy orders, lime-burners, and other such exceptional occupations. In all the regular occupations the increase is most curiously persistent. Drapers, grocers, ironmongers, chemists, all give a worse result. Failures among chemists and druggists reached 96 in 1878, against 76 in 1877; wholesale chemists, druggists, &c., are 41 and 20 respectively. The bad times seem to have told with especial severity on aerated-water makers, their list of casualties having advanced from 8 to 43. Surgeons, physicians, and dentists have risen from 62 to 70, journalists have jumped from 2 to 8, and newspaper proprietors from 3 to 9, while "private persons" (the self-styled "gentlemen" of the gazette), singularly enough, figure for 311 in each year.

We have by us a few specimen copies of the *American Druggists' Circular*, which we shall be happy to distribute to the first applicants. We receive subscriptions for that journal at the rate of 8s. per annum.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent:—

Artificial Teeth.—No. 5112.—J. H. Gartrell, of Penzance, Cornwall. Improvements in apparatus for the manufacture of plates for artificial teeth. Dated December 13, 1878.

Bottle-stoppers.—No. 4930.—S. Waters, of 34 Eastcheap, London, merchant. Improved means of closing bottles, jars, or other like receptacles. Dated December 3, 1878.

Bottle-stoppers.—No. 5209.—E. Edmonds.—A communication from W. Buckwell, of Roccautica, Italy, and A. Umbria, of Roccautica, Italy. Improvements in closing and stoppering bottles, jars, and other similar vessels or receptacles for containing preserved substances. Dated December 19, 1878.

Compound for Filling Decayed Teeth.—No. 5284.—T. Fletcher of Warrington, Lancashire. A new or improved compound for filling decayed teeth, and for general dental purposes. Dated December 27, 1878.

Covering Drums or Casks for containing Caustic Soda.—No. 5052.—F. H. Mort, of Widnes, Lancashire, alkali manufacturer. Improvements in covering or closing drums or casks for containing caustic soda and other like substances. Dated December 10, 1878.

Diffusing Apparatus.—No. 4955.—E. Johnson and L. Robertson, of Greenwich, Kent, engineers. Improvements in portable apparatus for generating and diffusing chlorine or other suitable gas for the purpose of fumigating and disinfecting rooms. Dated December 4, 1878.

Filling and Corking Bottles.—No. 5002.—P. Lafitte, engineer, and J. Pia, mechanic, both of Paris. An improved apparatus for filling, air-extracting, and corking bottles, flagons, or other vessels. Dated December 6, 1878.

Filters.—No. 5051.—C. Kessler.—A communication from A. Wegelin and E. Hübner, of Halle-on-the-Saale, Germany. Improvements in filtering-presses. Dated December 10, 1878.

Filters.—No. 5199.—F. H. Atkins, and W. G. Atkins, both of 62 Fleet Street, London, engineers. Improvements in filtering apparatus and in filtering materials. Dated December 18, 1878.

Insect Destroyer for Animals, Plants, &c.—No. 5090.—J. Wilson, of Penrith, Cumberland, chemist. Improvements in materials or compositions for destroying insects or parasites on animals and plants. Also applicable for certain curative and other purposes. Dated December 12, 1878.

Invalid Couches, &c.—No. 5230.—J. Chorlton, of Manchester, spring mattress manufacturer. Improvements in invalid couches, bed rests, and other similar articles. Dated December 20, 1878.

Magnetic Appliances for Curative Purposes.—No. 4861.—H. C. Byche, of Gothic Villas, Station Road, Gipsy Hill, Surrey. Improvements in magnetic appliances for curative purposes. Dated December 4, 1878.

Obtaining Oil from Seeds.—No. 5032.—J. Pearson, of Glasgow. Improvements in apparatus to be used in the obtaining of oil from seeds or other substances. Dated December 9, 1878.

Peptonised or Soluble Meat.—No. 5232.—S. Darby, of 140 Leadenhall Street. Improvements in the manufacture of peptonised or soluble meat. Dated December 20, 1878.

Pyroxyline.—No. 5057.—C. D. Abel.—A communication from V. Triboulet, manufacturing chemist, and L. A. De Besnécle, both of Paris. Improvements in the manufacture and treatment of pyroxyline for the production of a solid compound therefrom, and in the apparatus employed therefor. Dated December 10, 1878.

Respirator.—No. 5174.—K. N. M. Douglas, of Bournemouth, Hampshire. An improved respirator. Dated December 17, 1878.

Sanitary and Preservative Compound.—No. 4249.—W. Jeyes, of Catherine Street, Aston Cross, Birmingham, chemist. Improved compound for sanitary and preservative purposes. Dated December 23, 1878.

Sulphurous Acid Gas.—No. 5159.—R. V. Tuson, of Camden Town, London, Professor of Chemistry. Improvements in the preparation or generation of sulphurous acid gas. Dated December 16, 1878.

Treating Tie-douloureux, &c.—No. 4924.—W. Handysides, of the Borough, Newcastle-on-Tyne. A medical preparation applicable to the treatment of tie-douloureux and toothache, called "Handysides'" electric nerve snuff. Dated December 3, 1878.

Tooth-powder Boxes.—No. 5198.—G. Bernheim.—A communication from M. Bernheim, of New York, United States. Improvements in tooth-powder boxes and other similar receptacles. Dated December 18, 1878.

Letters patent have been issued for the following:—

Anhydrous Sulphuric Acid.—No. 2571.—H. G. B. Rober.—A communication from J. A. W. Wolters, of Brunswick. Improvements in the manufacture of anhydrous sulphuric acid. Dated June 26, 1878.

Bottle-stoppers.—No. 2771.—W. P. Cherry and C. E. Cherry, both of Porter Street, Hull, Yorkshire. Improvements in stoppers for bottles and similar articles, and method of closing and opening the same, and moulds for making stoppers. Dated July 10, 1878.

Dental Plates.—No. 3309.—R. Brewster, of 25 Broad Street, Golden Square, London. Improvements in apparatus for the treatment of celluloid and vulcanite in the manufacture of dental plates, and other articles moulded under heat and pressure, also applicable to other useful purposes where pressure is to be applied in a closed chamber. Dated August 21, 1878.

Filters.—No. 1958.—H. E. Newton.—A communication from A. L. G. Dehne, of Halle-on-Saale, Germany. Improvements in filtering apparatus. Dated May 15, 1878.

Manufacture of Soda Ash.—No. 3973.—G. Glover, of the Chemical Works, Carville, Wallsend, Northumberland, chemical manufacturer. A new or improved mode or method of destroying or removing deleterious compounds formed during the process of manufacturing soda-ash, such compounds being cyanogen compounds, sulphides, and hyposulphites of soda. Dated October 9, 1878.

Obtaining Sugar, &c., from the Seeds of Gramineæ.—No. 4301.—H. Simon.—A communication from Dr. G. Kühnemann, of Dresden, Germany, chemist. An improved process of extraction for obtaining sugar, phytolencimine (soluble albumen), phytodermaïose, and other substances or compounds from the seeds of gramineæ, and the apparatus employed for and in connection with such process. Dated October 26, 1878.

Pyroxyline.—No. 2519.—F. Wirth.—A communication from the Dynamite Manufacturing Company, of Hamburg, Germany. Improvements in the manufacture of pyroxyline and other nitrocellulose. Dated June 24, 1878.

Purifying Liquids, &c.—No. 2695.—G. Mackay, of Edinburgh, North Britain, manufacturing chemist. Improvements in the purification of liquids and in the utilisation and preparation of certain waste, and by-products of art and manufacture as purifying agents. Dated July 5, 1878.

Refining Saccharine Liquids.—No. 4586.—H. J. Haddan.—A communication from J. W. Decastro, of New York, United States. Improvements in the defecation, decolorisation, and refining of saccharine liquids. Dated November 12, 1878.

Soda.—No. 2449.—H. Unger, of Leipsic, Saxony.—Improvements in the manufacture of soda by means of ammonia and carbonic acid, and in the apparatus applied therefor. Dated June 19, 1878.

Soda and Potash.—No. 3079.—J. Maclear, of Glasgow, chemist. Improvements in the manufacture of soda and potash. Dated August 3, 1878.

Sulphurous Acid.—No. 3701.—J. Maclear, of Glasgow, North Britain, chemist. Improvements in apparatus for obtaining sulphurous acid. Dated September 19, 1878.

Sulphuric Acid.—No. 4131.—C. Norrington, of Plymouth, Devonshire. Improvements in apparatus employed in the manufacture of sulphuric acid. Dated October 17, 1878.

ABSTRACTS OF SPECIFICATIONS.

For permission to print the following we are indebted to the courtesy of the *Engineer*:—

1656. ANTISEPTIC.—KILLING ANIMALS AND PRESERVING THEIR FLESH. *R. Jones.*—Dated April 25, 1878. 4d.

The animal is stunned by a blow on the head, and the jugular vein is then compressed so as to distend it, when a trocar with a cannula is thrust into it at a point further from the heart than the point of compression. The trocar is then withdrawn, and the end of a tube communicating with a cistern containing either boracic or salicylic acid, is thrust into the cannula, whereby the circulating action of the heart causes this preserving fluid to be equally distributed through the system of the animal.

1686. PRESERVING MEAT, &c., *E. Van de Velde.*—Dated April 26, 1878.—(Not proceeded with.) 2d.

This consists in applying a solution or compound composed of about 100 parts of bicarbonate of soda, and 49 parts of sugar mixed in any suitable liquid, by preference cold water.

1766. PRESERVING AND EMBALMING, *C. Laurent.*—Dated May 2, 1878.—(Not proceeded with.) 2d.

The article of food to be preserved is coated with a mixture composed of 40 parts sugar and 60 parts bicarbonate of soda, dissolved in a little water.

1204. BOTTLE OR VESSEL FOR CONTAINING TWO OR MORE FLUIDS IN VARIOUS PROPORTIONS, *T. Davies and W. H. Staurope.*—Dated March 27, 1878.—(Not proceeded with.) 2d.

Placed round the neck of an ordinary decanter-shaped bottle is a circular plate or partition of the same material as that from which the main bottle is formed, which encircles the neck, leaving a sufficient space between the latter and the partition to form a vessel. The top of this subsidiary vessel thus surrounding the bottle neck is closed, except at one side, where an open space is left sufficient to enable the liquid contained within the subsidiary vessel to be poured or withdrawn from it with ease and convenience.

1683. BOTTLE AND JAR STOPPERS, *C. Farrow.*—Dated April 26, 1878. 6d.

A metal cap is connected to metallic slips which are sprung over the neck of the bottle or the jar. Through the cap works a screwed stem, adjustable by means of a screw nut, and carrying at its lower end a stopper of vulcanised indiarubber, cork, or other suitable elastic material.

1999. BOTTLE STOPPERS, *W. R. Lake.*—Dated May 14, 1878.—(A communication.) 6d.

A conical elastic stopper is secured to a cap hinged to a lever, which pivots on a rod secured round the neck of the bottle. By the eccentric motion of the lever the stopper is forced into the mouth of the bottle or withdrawn therefrom.

1649. BOTTLES, &c., *H. de Harilaaz.*—Dated April 21, 1878. 6d.

The bottle or receptacle consists of any kind of flask, the neck of which is provided with two projecting rings or collars, separated by a gorge or throat in which openings are contrived. To make use of the vessel, after having previously filled it with a liquid which is not allowed to reach beyond the lower ring, so as to leave space enough for the cork, is then to force the cork into the neck in such a way that the smooth side of the neck which extends from the second or lower ring remains tightly corked, as would be the case with an ordinary bottle. Then the upper part of the flask is corked by means of a second glass stopper, which may be rubbed or prepared with emery, porcelain, or any other suitable material, then level the upper cork with the neck in such a manner as to afford no hold for drawing it. To get at the contents of the bottle the upper part of the neck between the two rings is broken, when the second cork can be reached and withdrawn.

1693. BOTTLES, JARS, STOPPERING AND COVERING, &c., *B. Martin.*—Dated April 27, 1878.—(A communication.) 6d.

This consists of a cap made of soft metal, such as tin, placed freely on the neck of the bottle or vessel covered thereby. On and round the said cap is tightly fixed or compressed a slightly conical ring or circle made of tinned iron, which presses the cap against the neck of the vessel, thus forming a stoppering or covering. The said ring or circle is formed of a plain band of tinned iron, and the ends thereof are soft soldered together.

1705. BROMINE PROCESS AND APPARATUS FOR DEVELOPING, *H. Simon.*—Dated April 29, 1878.—(A communication.) 6d.

This consists in the process for developing bromine in a continuous manner, wherein the bromine liquor is introduced into the topmost of a series of vessels arranged in terrace form, while into the charge contained in the lowest of such vessels is introduced combined steam and chlorine gas for liberating the bromine, the liberated gas being caused to pass upwards consecutively through the several vessels of the terrace, while the charges of such vessels are made to descend step by step, that of the lowest vessel when exhausted of bromine being discharged into the dechlorinising vessel.

2020. CHARGING VESSELS WITH LIQUIDS, *A. Taylor.*—Dated May 21, 1878.—(Not proceeded with.) 2d.

This consists in the fixing of a pipe in the mouth or spout to supply air to the interior of the vessel, the top of which is closed, so that when the discharged liquid reaches the pipe the flow is stopped by reason of the supply of air being thereby cut off.

1715. COLOURING MATTERS, *F. Wirth.*—Dated April 29, 1878.—(A communication.) 4d.

Red, yellow, and brown colours are manufactured from the two disulfo-betanaphthalic acids by the action of diazo compounds produced from aniline, toluidine, and xylydine, and also from the higher homologues obtained by the introduction of ethyle and methyle into these amids and besides from naphthylamine.

2057. DISINFECTANTS AND DEODORISERS, *H. L. Jones.*—Dated May 23, 1878.—(Void.) 2d.

The disinfectant consists of a mixture of the following ingredients, 65 parts of chloride of sodium, 20 parts of sulphate of zinc, and 15 parts of sulphate of aluminium, anhydrous alum, rock alum, cake alum, or the ordinary alum of commerce.

1976. DYE STUFFS, PREPARATION OF, E. Tust.—*Dated May 16, 1878.*—(Not proceeded with.) 2d.

The dye stuffs or colours are prepared from chloride of benzole, which is treated with aromatical, primary, secondary, and tertiary amines or phenyles, admitting an oxydating medium, or with aromatical amines or phenyles, and the produce with a mild oxydating medium.

2067. ENEMA SYRINGES, J. Banks.—*Dated May 3, 1878.*—(Not proceeded with.) 2d.

The flexible barrel is formed in one piece with the suction and delivery tubes, the inlet and outlet valves being carried in small tubes, which can be inserted and held in the interior of the flexible pipes at any part of their length.

1697. FEEDING BOTTLES, INDIARUBBER PIECES FOR, G. W. von Nawrocki.—*April 27, 1878.*—(A communication.) 4d.

This consists in the application to a feeding-bottle nipple-piece of an air admission tube.

1277. FIRES, EXTINGUISHING, T. F. P. Mc M. Kavanagh.—*Dated April 1, 1878.*—(A communication.)—(Not proceeded with.) 2d.

An improved fire-extinguishing compound consists of a mixture of equal parts of chlorate of potash, resin, nitrate of potash, and oxide of manganese, moistened with a solution of silicate of soda, and compressed into a block covered with a fireproof case provided with a fuse, which, in the case of fire, ignites and sets fire to the compound, thus evolving a fire-extinguishing gas or vapour. Fire-extinguishers, which act by the mixture of two ingredients, are rendered automatic by closing the valve of the acid cistern by an inflammable band.

1933. FOODS FOR HORSE AND CATTLE, A. M. Clark.—*Dated May 14, 1878.*—(A communication.) 4d.

In the composition of these cakes nutritive matters, rich in nitrogen, are combined with matters of a cooling and emollient nature. The ingredients of 10 different cakes are given, the first consisting of 25 kilogrammes of clean oats, 20 kilogrammes of maize, 25 kilogrammes of beans, 10 kilogrammes of locust beans, 13 kilogrammes of rye, 5 kilogrammes of linseed, and 2 kilogrammes of salt.

1626. HORN AND IVORY SUBSTITUTE, SILICEOUS COMPOUND, W. Morgan-Brown.—*Dated April 23, 1878.*—(A communication.) 4d.

To finely pulverised bone, horn, ivory, or other similar substances containing gluten, albumen, and animal oil, is added two equal portions by weight of a solution of any of the alkaline silicates of about the consistence of syrup, the two being thoroughly mixed and rolled into sheets, when it can be formed into the required shape in moulds of porous material and then dried, forming a hard substance which can be employed for articles now made of bone, horn, hoof, or ivory.

612. INDIGO, RECOVERING, &c., F. Wirth.—*Dated April 22, 1878.*—(A communication.) 4d.

Indigo is recovered from the washing water and the fulling lye of woollen fabrics which are dyed with indigo by the use of hydrosulphurous acid with or without alkaline baths.

971. LARD, MANUFACTURE OF, J. Diddy.—*Dated March 11, 1878.*—(Not proceeded with.) 2d.

This consists of white flour with mutton and other fats of the like nature, to which is added white cotton, olive, lard, rape, colza, nut, niger, and other vegetable oils of a similar nature to cotton oils, and they are mixed in proportion of about 1 cwt. of flour to about 10 cwt. of the above-mentioned oils, and about 10 cwt. of mutton or similar fats.

1977. SALTSTONE FOR CATTLE, HORSES, &c., P. Schüller.—*Dated May 17, 1878.*—(Not proceeded with.) 2d.

This consists of a mixture of pure salt with Glauber's salts, chalk, bran, and ochre.

2130. SODIUM CARBONATE, MANUFACTURE OF, S. Pitt.—*Dated May 28, 1878.*—(A communication.) 4d.

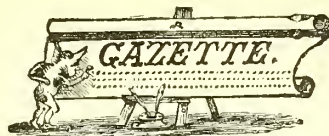
This consists in precipitating bicarbonate of ammonia by means of carbonic acid gas from an ammoniacal solution, the strength of which is constantly maintained by re-charging it with caustic ammonia.

1708. STOPPERS, C. M. Sombart.—*Dated April 23, 1878.*—(A communication.)—(Not proceeded with.) 2d.

This consists in the use of a hinged capsule of metal or other material, formed so as to clip or otherwise hold on to the neck of the bottle, and a plate or nut through which a screwed rod carrying a plate or disc is worked, whereby the nut plate and the disc plate may be forced apart, the former being pressed and held against the hinged capsule, and the latter against and on a cork, rubber, or leather, or other suitable disc over the mouth of the bottle.

2134. SURGICAL BANDAGES, APPARATUS FOR MANUFACTURING, C. B. Loughnan.—*Dated May 29, 1878.*—(Not proceeded with.) 2d.

This consists of a rectangular box or trough closed at both ends and open at the top; at one end is placed a roller fitted with a winch handle. Close to this winding roller are two other rollers placed one over the other. The trough is fitted with two transverse partitions. Powdered plaster of Paris is placed in one of the compartments and the bandage is drawn through it.



BANKRUPTS.

KINGSBURY, JOHN, & MOSS, AUGUSTUS, 14 Castle Road, Colechester, aërated water manufacturers. December 14.

SCOTCH SEQUESTRATION.

CREYK, ALEXANDER, Dalvey, Longmorn, Easterton, and Eardon, Elgin, surgeon and farmer. December 17.

LIQUIDATIONS.

ADAMS, CHARLES, 14 Bath Buildings, Montpelier, Bristol, chemist. December 14.

ANDREWS, GEORGE JAMES, 1 Little St. Andrew's Street, Upper St. Martin's Lane, accoucheur and chemist. November 28.

FEWSON, HARTLEY, Welwick Works, Bow Common, manufacturing chemist. December 17.

FROLEY, EDWARD, & LIGGINS, REUBEN, High Street, Wem, soda water manufacturers and general agents. November 30.

GILES, THEOPHILUS RIDGWAY, 1 London Street, Leatherhead, chemist. December 12.

HAMILTON, ROBERT, 61 and 62 Castle Street, Leicester Square, mineral water manufacturer. December 16.

HARDING, CHRISTMAS, Coedpoeth, Denbigh, chemist. December 6.

KOPPEL, WILLIAM, 5 Great Horton Road, Bradford, manufacturing chemist. November 30.

LE MARE, EBENEZER, Chapel Vaults, 10 Blomfield Street, 13a George Street, Spicer Street, Spitalfields, and Brookfield House, Lower Edmonton, mineral water manufacturer. December 30.

LOW, MAXIMILIAN, 2 Walbrook, and 31 Threadneedle Street, manager of chemical works and financial agent. December 18.

MCCONACHY, JOHN, Melcombe Regis, druggist. January 3.

PAGE, CHARLES, Barnstaple, chemist and tobaccoist. December 2.

PARKHOUSE, WILLIAM, & POLLOCK, MARY, trading as Parkhouse & Co., Tinstall and Newcastle, chemical manure manufacturers. December 7.

SMITH, JOHN, Lower Wade Street, Halifax, and Thornton Road, Bradford, grease extractor. December 13.

STOBART, WILLIAM, 16 High Street, Gateshead, wine merchant, innkeeper, and chemist. December 30.

TAIT, JAMES, Clavering Place, Newcastle, drysalter and oil merchant. December 14.

THEOBALD, GEORGE, Stockport Road, Levenshulme, horse and cattle medicine vendor. January 4.

WALKER, JAMES, 2 Greek Street, Leeds, and 29 Mincing Lane, drysalter.

WATKINS, FREDERICK, 91 High Street, Swansea, chemist. December 16.

WILKINSON, WILLIAM, Ghuman Gate, Chesterfield, chemist and druggist. December 13.

PARTNERSHIPS DISSOLVED.

CROSSLEY & CHAMBERS, Weymouth Street, Halifax, aërated water manufacturers. December 10. Debts by M. Crossley.

ESWALD, R. & Co., Pumpfields, Liverpool, greasemakers and palm oil refiners. November 26, as regards H. Gribbia.

HEALE & Co., 59 Bishopsgate Street, London, essential oil and carbolic soap merchants. December 4.

WAINWRIGHT & HEMINGWAY, late E. & J. Wainwright & Co., 94 & 96 Vauxhall Road, Liverpool, soap manufacturers. December 18.

WHITMARSH & ROWLAND SMITH, 1 Clapton Square, 6 Maitland Place, and 65 Median Road, Middlesex, medical practitioners. December 7. Debts by R. D. Smith.

WOLSTENHOLME, JAMES, & SON, Chesham Works, Pits-o'-th'-Moor, Bury, drysalters. June 30. Debts by John Wolstenholme.

DIVIDENDS PAYABLE.

BLAKE, ROBERT HOWARTH, 54 Great Ormond Street, Middlesex, physician (deceased). Second, of 2s. 6d.; at F. B. Leeming's, 10 Coleman Street, London, on and after December 11.

MCCULLOCH, HUGH THOMAS, & PERRIN, HENRY, 9 Mincing Lane, London, chemical merchants. Final, of 1d.; at Smart, Snell & Co.'s, 53 Cannon Street, London, on December 6.

TOMLINS, JAMES, Newport, Salop, surgeon. First and final, of 5s.; at R. N. Heane's, Newport, on and after December 9.

URMSTON, HUGH, Market Street, Warrington, manufacturer of mineral waters. First and final, of 4s. at Davies, Voisey, & Davies's, Bewsey Street, Warrington, on and after December 7.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Surplus stock one doz. Cupiss balls, 3s. 6d.; what offers? 2/247.

The Chemist and Druggist, from March, 1874, to the present date, price 17. 29.245.

A lot of useful surgical instruments to be sold cheap. J. Allen, Chemist, Plymouth.

24 doz. globes for the "Little Harry" night lamp, 3d. doz. W. A. Scott, Rochdale.

Handsome specie jars, height 13 inches; offers. Mr. Wills, Richmond Bridge, Surrey.

Pfeiderer's mixer for pill masses, powders, &c., as good as new, cost, with fixtures, about 5l., cash 3l. 251 Gray's Inn Road, W.C.

What offer for a three-guinea Statham's chemical cabinet, never been used? Pickburn, Chemist, Kildgrove, Staffs.

Ten tooth forceps, in capital mahogany lock-up case, velvet lined, 30s. William Turner, Chemist, Totterdown, Bristol.

The Lancet for 1878, complete in numbers, good condition; purchaser pays carriage. J. Dove, Chemist, Sherburn, South Milford.

The Chemist and Druggist from January, 1867, to December, 1877; what offers? Ombler, Chemist, New Southgate.

For Sale.—Fixtures, bottles, &c., suitable for a small chemist's shop or surgery. Apply, Merryweather & Dobson, Leicester.

Ten doz. condensed-milk cans, tops only cut, bright; low offer in cash accepted. Priestley, Alresford, Hants.

Baker's patent sieve and mixing machine, four grades, nearly new, cost 13s., 2s. only. Campkin, Chemist, Cambridge.

6 1-lb. stoppered bottles Twemlow's chlorodyne; what offers? cash or exchange. Fuller & Co., Norwich.

For Sale.—16 four-gallon pear-shaped earboys, cut-glass stoppers. Price 3l. each; or what offers? 244/33.

Halse's Medical Galvanic Apparatus; used two months; offers. Stevens, Chemist, New Brompton.

Pharmaceutical Journal; first four years of new series; complete and perfectly clean; what offers? Brailsford, Battle.

3 lbs. ol. lavand., Aug., 1872, 80s. per lb.; 11s. Collis Browne's chlorodyne, 7s. in Manchester. G. E., 416 Stockport Road.

Kirke's "Handbook of Physiology," new, 10s. 6d.; also "Veterinary Pharmacopoeia," new, price 5s. 6d. R. Harrison, 28 Blackman Street, London.

Half-gross penny squares silver white gutta-percha enamel, 2s. the lot. Send three stamps for sample. R. J. Spenceley, 149 Oxford Street, Stepney, E.

Quantity fine wax, good colour, price 1s. 2d. per lb.; or exchange for English honey, if cheap; sample free. Herbert Kemp, High Street, Horncastle.

Two 90-gall. oil cisterns, galvanised iron, fitted with brass taps and loose lids, only used a few months, price 2l. each. Potts, Chemist, Maudfield.

75-gallon zinc petroleum cistern, too large for owner; also first-rate Avery's platform weighing machine, quite perfect, almost new; will be sold very cheap, or suitable exchange accepted. Kay, Chemist, Crewe.

A good balance, by Mason, with weights, 35s.; student's microscope, slides and glass shade, only 30s.; sundry chemical apparatus, very cheap. Student, 11 Eagle Parade, Buxton.

Squire's "Companion," 7th edition; Atfield's "Chemistry," 4th edition; Pharmacopoeia, 1874, good as new; offers. J. E. S. Bunn, Halstead.

Patent fire-lighters, 12 gross, 6s. per gross; good ointment machine, 5l.; ruby lamp, worded "Chemist," for front, 2l. 10s. Palmer, East Gates, Lynn, Norfolk.

Map of London, mounted, 77 inches by 55 inches; *The Chemist and Druggist* complete from 1869; offers. Snowden, Robertson Street, Hastings.

Show-case, 47 inches long, 14 wide, and 9 deep; stand to show 1 dozen Rimmel's perfumery with bottles; offers. Snowden, Robertson Street, Hastings.

Inhalers: Swan's, 1s.; Nelson's, 2s.; Gabriel's odontalgique, 3s.; gazogenes, seltzogenes, both the 3-pint size, will take 10s. each. Snowden, Chemist, Hastings.

What offers for the *Lancet* and *Pharmaceutical Journal*, posted Mondays after publication, commencing January 6? Pickburn, Kildgrove, Staffs.

Magie lantern and 28 slides, three moving figures, all in perfect condition and good working order, price 30s. the lot. W. T. Jackson, Staleybridge.

Ten years of *Pharmaceutical Journal*, '68 to '78, the first 3 vols. well bound, remainder unbound but complete. Offers to H. Churchill, Lower Norwood, London.

Superior microscopic slides of "drunkard's liver" and healthy liver, for comparison, with explanatory remarks; guaranteed. Post free, 3s. 2d., from Dr. March, St. Helens.

Marble mortar with lignum vitae pestle on handle, outside diameter 16 inches, inside diameter 12½ inches, 16s.; also a 1-gallon Pindar's tincture press, 7s. 6d. Hay, Chemist, 4 Regent's Terrace, Hull.

Hooper's "Medical Dictionary," 2s. 6d.; Buchanan's "Medicine," 2s.; Fergusson's "Surgery," 3s. 6d.; Barff's "Chemistry," 2s.; also a few other books, cheap. Student, 11 Eagle Parade, Buxton.

Chemists' drawer labels, a complete set of very pretty glass labels, gilt, with black letters and bevelled edges; 78 5/8 by 1½ inches, and 16 6½ by 1½ inches; list on application, no reasonable offer refused. G. T. Shaw, Seedsman, &c., 22 High Street, Nantwich.

Nests of drawers, window enclosures, glazed cases, shop jars all sizes and colours, show bottles, specie jars, store bottles, pill machines, and every requisite; also medical books, surgical instruments, tobaccoists' show-cases, jars, &c., cheap, to clear out. Sewing machine, 2l. 294 Old Kent Road.

Quinine (Howard's), 5 bottles (oz.); morph. mur. (Macfarlan's) 2 ozs.; 2 lbs. calomel; 1 lb. ext. sarzæ liq.; 1 lb. ol. pimentæ; 14 lbs. antim. sulphuratum; 10 lbs. pulv. antim. comp.; 1 lb. bals. Peru; 2 lbs. tr. aloes comp. Send cash offers, also exchange offers (both), for surplus stock. Maitland, Stonehouse, Plymouth.

For sale, pair of brass pillar counter scales, in good condition, box-end, beam, and mounted on heavy mabogany slab; similar to Maw's Fig. 1, but more massive; cost about 55s.; price 35s. On view at the office of the Barusbury Glass Company, 5 Little Britain, E.C.

Smith's "First Latin," 2s.; Riddiman's "Rudiments," 9d.; Edinburgh Academy "Rudiments," 1s.; Roscoe's "Chemistry," 2s. 6d.; Gregory's "Chemistry," 1s.; Cook's "Botany," 6d.; "Cæsar," 9d.; Statham's 15s. laboratory with practical apparatus, 10s. 6d. R. Sheedie, care of A. Conitts, Pathhead, Kirkcaldy.

2 oz. good otto rose, 21s. per oz.; 80 lbs. senna, 3½d. per lb.; 20 cwt. powdered feugreek, coarse 14s. 6d. per cwt., sifted 16s. per cwt.; 56 lbs. pulv. anisi, 6d. per lb.; 56 lbs. aniseed, 4½d. per lb.; 100 lbs. sapo castil, 4d. per lb.; good isinglass, 5s. per lb.; 4 oz. musk pod; offers wanted; cash or exchange. Nicholson, 5 Bailgate, Lincoln.

Dentist's show-case, cheap, attractive; "Treatment of Syphilis," T. W. Cooke, 1s. 6d.; Bradley on "Syphilis," 1s. 6d.; "Treatment of Bronchitis," Dr. Copland, 2s.; "Treatment of Venereal Disease," Dr. Chapman, 1s. 9d.; n.m. or w.m. 1 lbs., 7s. 6d. dozen; cash with order only. J. W. Adams, 51 Oxford Street, Salford.

12 Lambert's Scott's pills; 3 ditto, 2s. 9d.; 6 Steedman's powders; cash, 15s. 6d.; Milton's "New Treatment of Gonorrhœa, Gleet, &c., with Prescriptions," 4s. 6d.; "Diseases of Women and Children, with Symptoms and Means of Detecting Pregnancy," by Dr. Ferguson, illustrated, clean, perfect, 10s., both 12s. 6d. 13.247.

Two pear-shape show-bottles, about 6 gallons each, cut-glass spiral stoppers, offers wanted? Taylor on "Poisons," 5s. 6d.; Beasley's "Receipt Book," 3s.; Beasley's "Pocket Formulary," 4s.; Watson's "Practice of Physic," two volumes, 9s. 6d.; tooth key and two pairs tooth forceps, 5s. 6d.; 26 upright black store bottles, labelled, about 4 quarts, japanned caps, offers wanted. Moore, Chemist, Cheltenham.

Johnson's "Compendium for Chemists," third (latest) edition (Silverlock), new, 8s. 6d.; Roberts' "Urinary Diseases," 5s.; Guthrie's "Commentaries on Surgery," 4s.; "Conservative Surgery" (Davis), 3s. 6d.; "On the Knee Joint" (Swain), 3s.; "Animal Chemistry" (Liebig), 2s. 6d.; Gerard's "Herbal," fine copy, offers wanted; Beasley's "Formulary," 5th and 6th editions, 1s. each. Newcombe, 8 Granby Hill, Bristol.

What offers for whole or part? 56 lbs. rad. calumb.; 1 7s. 6d., 4 4s. 6d., 2 2s. 6d. Townsend's sarsæ; 2 4s. 6d. Blood purifier; 1 4s. 6d. acacia balsam; 2 1s. 1½d. herbal ointment; 3 1s. 1½d. renouv. pills (Prof. Phelps Brown's); 5 Taylor's 2s. 6d. horse cough powders; 2 3s. condition balls; 3 1s. 9d. Cupiss balls; 1 4s. 6d. A and B's Infant's Preservative; 2 2s. 9d.; 4 1s. 1½d. Stanton's Household F. pills; 2 2s. 6d. Steven's ointment; 1 3s. 6d. Ross's depilatory; 1 2s. 9d. Rowan's worm powders; 3 1s. 1½d. Rowan's soothing powders; 2 2s. 9d. Susquehana pills; 10 tonic cups. 18.213.

Fifty questions asked at last Minor (London or Edinburgh), 2s.; 30 prescriptions given to dispense at Minor during past 12 months, with modus operandi, 2s. 6d. Saunders, 79 Gaisford Street, N.W.

Several 1, 2, 3, 4 and 5 grain pill machines, to cut 24, 16s. 6d. each, best maker; several small homeopathic cases, cheap; one 48 5-grain pill machine, 30s.; mortars; silvered plate-glass in black and mahogany frames; plate-glass shelving; 3 4-ft. nests drawers for under counter with label, paper, and other drawers, 65s. each; 1 each very elaborate dispensing screens, 5 ft. 6 long, 6 ft. long, and 6 ft. 6 long, with glass case at each side, looking-glass centre, with marble slab in front, silvered plate glass to back of cases, and shifting shelves, also tablets "Dispensing Department" on top of case, also three shelves the entire length of back for dispensing bottles, 8l. 10s. each, a bargain. E. Natali, 207 Old Street, opposite Great Eastern Street, E.C.

A quantity of mahogany top, moulded front edge, and deal mould and panelled fronts, painted and grained mahogany, from 4 ft. long to 15 ft. long, 3 ft. high, 10s. per ft. run, 24 in. wide, fig. 147; several mahogany top cupboards, as under cases, figs. 198, 199, and 200, 3 ft. high, 15 in. wide, painted and grained mahogany, 12s. per ft. run, from 4 ft. to 12 ft. long; 50 nests mahogany-fronted dovetailed drawers, glass knobs and gold labels, 2s. 6d. per drawer, in nests from 3 ft. to 15 ft. long and 2 ft. 6 in. high; if with lockers under and mahogany slab top, 3s. 3d. per drawer; mahogany-fronted shelving, from 10-ft. to 12-ft. lengths, 6d. per ft. run; 8-ft. glass case for wall, as fig. 200, equal to new, 14l. E. Natali, 207 Old Street, almost opposite Great Eastern Street, London.

5-ft. 6-in. bent plate-glass counter case, as fig. 41, 5l.; 3-ft. do. do., as fig. 16, 40s.; 7-ft. do. do., as fig. 97, 8l.; 4-ft., as fig. 95, 80s.; 5-ft., as fig. 96, 5l.; 6-ft., as fig. 99, 7l.; 3-ft., as fig. 100, 60s.; 3-ft. 6-in., as fig. 100, 65s.; 4-ft., as fig. 101, 80s.; 4-ft., as fig. 41, 80s.; 6-ft., as fig. 105, 7l.; 8-ft., as fig. 105, 9l.; several as figs. 27, 9, 10, very cheap; 3 mahogany paper stands, as fig. 67, 8s. 6d. each; a number of smaller glass counter cases, very cheap, also others as fig. 81, from 5s. each; tooth-brush cases, as fig. 52, 30s. each; as fig. 7, 28s.; as fig. 8, 30s.; sponge cases, as fig. 90, 90s.; as fig. 92, 5l.; desk and case, as fig. 21, 70s.; 5-ft. dispensers' screens, as fig. 78, 5l.; as fig. 163, 4l.; 164, 5-ft. long, 6l. 10s.; 7-ft., 6l.; 4-ft. wall case, 3l.; several other very cheap screens. E. Natali, 207 Old Street, opposite Great Eastern Street.

5 doz. shop rounds, 9s. 6d. doz., labelled; 6 doz. 1½-oz. black stock bottles, japanned covers, 1s. 6d. each; 6 doz. jars, as fig. A, labelled, 2s. 6d. each; 1 doz. fig. D, gold covers, elaborately labelled, 11 in. high, 6s. 6d. each; 19 4-lb. blue jars, labelled, equal to new, 1s. 9d. each; 24 6-lb. do., do., 3s. 6d. each; 24 white do., 1s. 6d. each; 24 1-lb. brown jars, japanned covers, 6s. 6d. doz.; 24 4-lb. blue jars, japanned covers, 1s. 6d. each; 24 6-lb. do. do., 1s. 9d. each; 24 6-lb. do. do., 2s. each, all equal to new; 50 upright show bottles, white glass, 1 to 4 galls., 1s. 9d. to 6s. each; 5 specie jars, Royal arms, equal to new, 28 in. high, with glass gold covers, and 9 in. square and round stands, 3l. each; several others, 45s. each; a quantity of others, scroll pattern, 50s. pair; set of three fancy vases, honey, &c., as Maw's, page 114, 25s. set; a number of carboys, from 1 to 6 galls., very cheap. E. Natali, 207 Old Street, opposite Great Eastern Street, London, E.C.

Dental engine, Morrison's, complete, with right-angle attachment, bars, &c.; Snow & Lewis' automatic plugger, 12 points for same, gold filling, forceps, gum clamps, &c.; half Ash & Son's price, see catalogue; or exchange for microscope; several gross best syringes, male or female, 2-oz., 4s.; 1½-oz., 3s.; 1-oz., 2s.; 6d.; ½-oz., 1s. 8d.; 2-dram, 1s. 6d.; sent for enclosure, or carriage paid on 1l. C. J. Stansley, jun., 154 Hoxton Street, London.

1 splendid chonised plate-glass flat counter case (dust proof), 7 ft. long, 2 ft. wide, 11 in. high, 6 velvet-lined trays and 3 doors to fall down, lined with plate mirrors, 7l.; it has a slight crack at one end, but otherwise good as new; this is a bargain; cost nearly three times the price six months ago. 1 mahogany bent plate-glass counter case, 3 ft. long, 12 in. wide, 1 8 in. deep, with a 5-in. bottle rest at back, door to let down lined with mirror; the glass in this case is cracked, but otherwise in good condition, 30s., cheap. 2 mahogany upright cases, 2 ft. wide, 2 ft. 6 in. high, with carved scroll on top, and glass plate ("Perfumery") over; 4 marble glass shelves inside, 27. 5s. each. 1 pair brass counter scales, box, and beams; length of beam 11 in., mahogany slab 16 in. long, 17. 2 lilac earthenware vases labelled "Honey" and "Tamarinds", and 1 white vase labelled "Leeches"; one of the lilac vases cracked at the back, but not worse for show, lot 25s. 1 mahogany bent glass counter case, 17 in. long, 12 in. wide, 5½ in. high, with mirror at back, 12s. 6d. S. Parker, Chemist, 360 Leeds Road, Bradford.

Surplus stock.—Two new mahogany 5-grain pill machines (cut 24), rollers, 1s. each; a ditto with marble slab (nearly new), 1s.; a ditto in good order, 10s.; pastille machine to cut 24, good order, 5s. 6d.; 3 lbs. broken Brazil isinglass, soiled with dust, 6s. 6d.; 15 doz. Bird's ginger and raspberry beer powder, 4d. packets, 10s. the lot; 23 doz. 2 oz. cardboard syringe cases, 6d. doz.; 10 doz. wood ditto (various), 1s. doz.; two doz. 2s. new composition mortars (no pestles), 4s. 6d. doz.; set of composition pestles and mortars (new), Nos. 1 to 8, 18s. 6d.; 20 doz. 4 oz. squat pomade bottles, varnished wood caps, 10s. gross; about 10 gross 2-drachm flat square bottles, suitable for gold ink or cement, 3s. gross; quantity labels for same; 18 glass urinals, 6d. each; about 2 gross ½-oz. octagon and round vials (dark blue), 4s. gross; 1 gross stoppered 1-oz. Lubins, 16s.; some 1-drachm stoppered vials, 9d. doz.; 2-drachm, 11d.; ½-oz., 1s. 1d.; 1-oz., 1s. 3d.; 18 plain white china invalid's feeding cups, 6d. each; 4 brass, 1 plated Simpson's enema apparatus in mahogany cases, lock and key, 40s.; 20 doz. heavy crystal cut-glass dressing-case bottles (various), stoppered, with screw tops for metal caps, 4s. doz.; 9 doz. sixpenny cement in boxes, 2s. 3d. doz.; 20 gross 1d. heart-shape plaisters, 4s. 6d. gross; 30 1-lb. bottles perfume for hair oil, 4s. bottle, sample two stamps; 20 doz. shilling cut-glass gilt smelling bottles, 5s. doz.; 6 doz. shilling Sanitas (liquid), 5s. 3d. doz.; offers (per gross) for a few gross essence of thistles, mixed sizes and shapes, including long neck lavenders, Lubins, colognes; also pomades, oval, round, &c., various sizes, no caps; 50 lbs. homeopathic pills (various), lot 9d. lb.; offers (per doz.) for quantity *Pharmaceutical Journals* (soiled outside), also Nos. 1 to 212 of the *Garden*, 9 Nos. wanting; 3 glass pestles and mortars, 10, 30, and 40 oz., 5s. 6d.; 40 lbs. spirits nitre, 850, 2s. lb.; 4 lbs. tinct. stramonii, 1s. 8d. lb.; 14 lbs. cochineal, D.C., 2s. 6d. lb.; 10 oz. pulv. castoreum opt., 7s. 6d. W. Rogers, Chemist, Stepney, E.

FORMULÆ.

Chlorodyne, for retail and dispensing, equal to any in the market; formula, with full directions, sent for 5s. in stamps. 33/223.

Recipe for a toothache remedy which has acquired an extensive sale. Would form a lucrative specialty. Full particulars for 1s. 6d. 32/245.

A splendid furniture cream, unequalled, 2s. 6d.; sauce, 2s.; lavender water, choice, 2s. 6d.; scarlet reviver for scarlet coats, 5s.; ring-worm lotion, 2s. Provost, Chemist, Peterborough.

Efficacious cough mixture, 2s. 6d.; inseparable line cream, 2s.; neuralgic mixture (certain cure), 2s. 6d.; valuable remedy for gonorrhoea, 5s.; furniture paste (superior), 1s. 6d.; sauce, one of the best made, 3s. 6d.; baking powder, 1s. 3d.; first-class preparation for the skin against sun, wind, and rain, 2s. 6d. Major, 12 Brooker Street, Cliftonville.

Chilblain liniment.—Chemical brass paste; composition for cleaning harness; French polish reviver; restorative cream (prevents hair turning grey), liquor sennæ comp.; liquor opii sedat.; oleum flavæ conct. (3j. to lbj.); brilliantine (inseparable); fragrant foaming dentifrice (similar to Floriline); chemical food (improved formula, keeps well); magic neuralgic drops (never failing remedy); pearly white pill coating; glycerine jelly (transparent); Kaloderma, or skin beautifier; cherry tooth paste (never ferments); marking ink (black or red); cement (equal to Coaguline); balsam elder flowers; aqua camphor. conct. 1 in 16; with many others, send stamp for list; the above are prepared and sold by a West End firm; inexpensive to prepare and command ready sale; 5s. each (five for 1l.) letters only. "Analyst," 79 Gaisford Road, N.W.

WANTED.

"Selecta e Prescriptis," recent edition. Fuller & Co., Norwich.

Two strong ½-gallon iron mortars. Lead-better, Chemist, Sunderland.

A 24 5-gramme pill machine, dispensing scales. Thompson, Sparkbrook, Birmingham.

Dental chair, hook case, shop jars and bottles. 251 Gray's Inn Road, W.C.

Atfield's "Chemistry," and other books for Minor student. 11 Eagle Parade, Bxnton. Small tincture press; Squire's "Companion," latest edition; state price. A. Smith, New Swindon.

Francis' No. 5 printing press, in good condition; state lowest price. Gaitskill, Gosforth, Carnforth.

Samuel Brown & Co.'s bronchial cigarettes; state quantity and price. Macfarlane, Chemist, Wishaw.

Muter's or Wills' "Materia Medica," latest editions; state prices. "Minor," 224 Coldharbour Lane, Brixton, S.W.

A good recipe for indelible marking ink for linen, to be used with an indiamber stamp, and not requiring heat. 24/26

A second-hand bottling machine for patent stoppered soda-water bottles; also a few bottles. 9/246.

Wax model of head and neck, showing muscles and nerves, must be cheap; also skull and pelvis bones. Pickburn, Kidsgrove.

Chemist and Druggist, posted monthly about a week after publication; also the *Pharmaceutical Journal* weekly. Send particulars to T. J. Linay, 95 Farringdon Street, E.C.

Taft's "Operative Dentistry," or Tomes' "Dental Surgery;" Beasley's "Pocket Formulae, and 3,000 Prescriptions;" cheap. 18/243.

Stoppered rounds, 36 each, w. and n. mouthed, 30 oz., 24 8 oz. w.n. stoppered, 48 8 oz. n.n. stoppered, 12 30 oz. white syrup bottles; 36 6 oz. blue earthenware jars; desk and glass case, as Maw's fig. 13. B. Waddington, Thornton, near Bradford.

Pharmaceutical Chemistry.

PLATINUM PLATING.

PROFESSOR BÖTTGER announces that a concentrated boiling solution of neutral sodium citrate will dissolve large quantities of freshly-precipitated ammonio-platinic chloride. This solution decomposed by a couple of Bunsen's cells will deposit "a handsome, lustrous, perfectly homogeneous, and very tenacious coat of the purest platinum" on articles suitably prepared. The ammonio-chloride is the only platinum compound which can be used for plating, and its slight solubility has hitherto made it impossible to obtain a satisfactory coating of the metal by electro-doposition.

BENZOIC ACID.

RUMP has stated that all the German "sublimed" benzoic acid is made by subliming the artificial acid made from urine with a little benzoïn. This is denied by Gehe & Co. in their last report. The Australian gum-acroides is now used to a considerable extent for making this acid.

ZINC PERMANGANATE.

A. KUPFER states that the commercial solution of zinc permanganate contains only 10, instead of 25, per cent. as stated. It is also contaminated with chlorides. It should be made by Gustavsen's method—viz., by decomposing barium manganate with carbonic or dilute sulphuric acid, and adding to the solution of barium permanganate thus produced an equivalent quantity of zinc sulphate. The strength of the solution should not exceed 48 grains to the ounce.

PARACOTOIN.

PROFESSOR BÆLZ, of Tokio, Japan, has had striking success in the cure of malignant cholera by means of paracotoïn. He administered, by hypodermic injection, .2 gramme suspended in equal parts of glycerine and water. In the only five cases in which he employed it the cure was prompt and thorough. The Japanese Government has taken measures to provide a supply of the drug for use in any fresh outbreak.

VANILLIN SAID TO BE USELESS AS A FLAVOURING AGENT.

THE discovery of a process for producing vanillin artificially was of great chemical interest, but it appears from a circular issued by Messrs. Haas & Rosenfeld, of Gaya, Moravia, that the product, though valuable for perfumery, does not possess the flavouring properties of vanilla. The same is true of vanillin obtained from the plant itself.

THE ALLEGED ANTAGONISTIC ACTION OF ATROPIN AND MORPHIN.

DR. KNAPSTEM, of Bonn, in an article in the *Berlin Klin. Wochenschrift*, No. 47 (quoted in Hager's *Pharmaceutical Centralhalle*), reports a series of experiments undertaken to test the power alleged to be possessed by morphin and atropin to mutually neutralise the effects the one of the other. These experiments show that a simultaneous administration of morphin with atropin or *vice versa* did not allow larger doses of either poison to be administered to dogs than they could support if given singly. It is possible that in cases where such immunity would seem to have been observed comparatively inert atropin may have been employed.

ADULTERATION OF KAMALA.

KREMEL mentions in the *Zeitschrift der Ost. Apoth. Vereine*, 16-33, two cases of the adulteration of kamala. One sample contained so much red bole that its ash amounted to 79.5 per cent. Another specimen was mixed with the powdered flowers of *carthamus tinctorius* or safflower.

IRIDESCENT GLASS.

GLASS is made iridescent by exposing it at a high temperature to the fumes of stannic chloride, to which barium or strontium nitrate is added, when deep colours are required.

COMMERCIAL NICKEL, according to the *Metall Arbeiter*, contains sometimes 8 per cent. of cobalt, and 12 of copper, besides a little iron, arsenic, zinc, manganese, sulphur, carbon, silica, and alumina.



THE most marked characteristic of the year just gone, as far as general trade is concerned, has been especially the low prices which have prevailed for almost every article of large production, or of constant consumption. That we are passing through a period of excessive dullness it would be idle to deny, but that British trade is in such an alarming condition as some of its critics declare does not seem to us to be warranted by facts. The total declared value of our exports during the year 1878 was 192,804,000*l.*, against 198,893,000*l.*, which represents a decrease of but a fraction over 3 per cent. The general fall in prices is certainly more than sufficient to account for this diminution, and therefore we cannot think that, in respect to bulk at any rate, the trade of Great Britain is on the whole worse in 1878 than in 1877. Compared with the brilliant year 1872, there is a difference of over 60 millions in value against last year, so that there is evidently good ground for the anxiety which prevails; and we know very well that there are special districts where, for peculiar reasons, great distress has occurred. Profits are no doubt smaller all round, and generally speaking wages are lower. But our export trade is still by far the largest in the world, and, as is well known, British capital is at the bottom of a good deal more trade than is represented by the figures of the English Board of Trade. When we look back on the past year, too, and remember how it opened with alarming probabilities of a general European war; how its progress was marked by political excitement and unrest; by financial disasters revealing in some quarters financial crimes; how it had to bear not only the effects of several dull years immediately preceding, but what was worse, several years of undue inflation preceding them, we can only wonder and be thankful that it turned out no worse than it did.

The imports of the year are to some extent the test of the internal prosperity and wealth of the country, but not entirely. There has been a decrease of 7 per cent. when compared with 1877, the total value being 366,060,000*l.* in 1878, against 394,274,000*l.* in 1877. This seems to show a diminished consumption, especially considering the natural increase of population. But there is first to be remembered that many of the articles imported to the greatest extent are much cheaper than they were a year ago; and more satisfactory still is the fact that our imports of wheat and barley are very considerably less in consequence of a good harvest at home, and what we have had has been bought at much lower prices.

It is thus pretty certain that, taken all round, the consumption of manufactured and imported products in this country has very little, if any, fallen off. As tradesmen are the necessary distributors of all these products, it is hardly reasonable to suppose that they as a body have felt severely the bad times; while many of them, dealing in articles which have been bought more cheaply than usual, a benefit which customers have only partially shared, have, we imagine, found 1878 a year of rather better profits than ordinarily.

We make no attempt to forecast the coming year. It is a fact that we commence this year with better chances of general peace than were apparent last year. All European nations are, or seem to be, earnestly desirous of setting seriously to business; there is a vast amount of money lying idle waiting for distinct indications of a turn of the tide; there can be but few accumulations of stock in

middle hands; and, whatever may remain, it is certainly advantageous that what was rotten or dangerous in our commercial system should be swept away. All this is promising, but after recent experience no wise prophet will venture to say more.

Medicines and medical stores found very large customers last year in several Governments, at the expense of taxpayers generally. Makers of fine chemicals have found generally a good market for their products. The steady fall in the alkali market during the year has severely tried the manufacturers of Lancashire, Tyneside, and Scotland. The demand has been scarcely less than in previous years, as far as quality is concerned; but in the early part of the year the production seemed to have greatly expanded, and the consequence was that when there were no speculators to be found the market was suddenly glutted, and it has never got over the effects. A glance at the prices opposite will show how almost invariably large products have declined in value. There have been a few cases of successful combination to raise prices—as, for example, in iodine and in bichromate of potash. It is now said that arsenic producers are following the same example; and as they are but few this is not improbable. The prices of soda, bleaching powder, oxalic acid, and chlorate of potash are at the present time lower than they have ever been known. This reduction is due to some extent to the cheapness of material as well as to more economical methods of production; but those qualified to judge say that they can scarcely leave any margin for profit. It is noticeable that for these products and for others in the manufacture of which they are used the United States and Russia have both bought more than ever during the past year. It is, therefore, certain that any improvement in general trade would ensure a rapid rise.

So far the present year has not given any sign of improved business, but there is certainly a more limited production, and it is yet too early to expect shipping demands.

At the moment citric acid is held rather more firmly, a less price than 2s. 1d. being declined. Tartaric is, however, duller. Quicksilver has been again reduced, and a fall of 2d. per lb. in its preparations is recorded for the month. Iodine is very firm at 13d., and it has been anticipated that a further rise would be made, but it is doubtful whether there is at present a sufficiently strong demand to allow this to be done. A decline of 6d. in saltpetre is a satisfactory sign of more peaceable prospects.

The opium trade during the year has been steadier than usual. Great efforts were made by speculators to induce belief in a poor crop, but they never succeeded in raising prices to any extent, and, as it turned out, the crop was quite equal to the average both in quality and quantity. There is now a considerable stock both here, in the United States, and in Turkey. Reports have lately been made that a long-continued drought has affected the chances of the next crop, but these guesses are very problematic. The chief dangers that the Turkish Government, in its difficulties, may find it desirable to put an export duty on the drug, and as they can certainly do that without much affecting the volume of trade, it will be almost surprising if they do not use the opportunity.

A peaceful year will almost certainly bring down the price of quinine a few shillings. Much has been made of the insufficient supply of rich barks, but the war demands have been the true occasion of the high price which this chemical has maintained during the year. Prices have been slightly easier during the past month, and it is noticeable that bark sales have lately passed off without any feverish symptoms.

At the first drug sales of the year large quantities were brought forward, and there seemed to be a fairly good demand. In many drugs holders are firm for higher prices. Almonds are very scarce, and an advance has been made in the price of the expressed oil. Castor oil is also stronger, in consequence of a similar feeling at Calcutta. Holders of camphor having run the price up, have given way, and the advice of fresh arrivals has caused a considerable drop. Balsam of copaiba is getting scarce, and was freely bought at better prices. Rhubarb is wanted if of best qualities, and brings high prices. It is stated that holders of essence of lemon and bergamot in Sicily are expecting to get higher rates this year, though, as the supply is believed to be abundant there, we do not anticipate more than a temporary advance if even that can be obtained. The sudden rise in

aniseed and in the oil has been lost. It appears to have been due to a sudden cornering of some merchants who had sold in advance more than they could touch. Barbados aloes are bought readily when offered. Cummin seed has become very dear in consequence of an almost entire failure of the Morocco crop, and cubebs are still advancing. Balsam of Peru is offered at 4s. 9d., tolu at 2s. 9d., and Canada at 11d. Blue galls sell at 7s. to 90s.

The oil market continues generally depressed for fish oils, for olives, for palm, and for cotton seed. In all these there has been a decline since last month. In coconut oil there has been a considerable fall, but in that and in cotton oil there has been a rally within the past few days, some quantity being bought on speculation on account of the low prices. Linseed oil has been dull, but is now recovering, and there is also an upward movement in rape. Petroleum has been selling at 10½d., but is now slightly easier. The extraordinarily low prices of last October and November, which were under the price at which the oil could be imported, tempted some heavy speculation, and for a little while the stock has been held in a few hands, but arrivals will soon almost certainly occasion lower prices; 10d. is now accepted for spot, and 9d. for the month or 8½d. for February. A quantity of superfine, 900 barrels, was recently sold by auction, and realised first 11½d. and afterwards 11¼d. Turpentine is steady, but is a shade easier, 21s. to 21s. 3d. being the price for spot, and 21s. 9d. for January-April.

	Stocks Dec. 31		Imports Dec. 31		Deliveries Dec. 31	
	1878	1877	1878	1877	1878	1877
Aloes.....cs	2,341	2,040	3,491	2,572	3,191	2,896
".....kgs	12	14	3	5	5	11
".....gourds	355	2,309	489	2,980	2,443	2,330
Aniseed, Star.....chts	612	961	758	315	1,097	1,084
Arrowroot.....cks	13,933	13,311	14,286	16,935	13,673	12,530
".....bxs & tins	7,167	6,574	9,055	10,699	8,462	8,309
Balsam.....cks, &c.	104	188	267	511	351	679
Bark, Medicinal.....cks, &c.	702	1,169	2,237	3,720	2,704	2,701
".....srns, &c.	8,534	10,798	44,195	30,975	46,437	27,953
Borax.....pkgs	1,060	1,033	912	441	884	809
Bees' Wax.....bls & srns	982	554	957	326	529	256
".....cks & cs	1,742	1,369	2,051	2,478	1,679	2,079
".....cakes	27	8	457	188	438	299
Wax, Japan vegetable, pkgs	4,656	6,314	1,139	5,459	2,667	6,677
Campbor.....pkgs	772	4,505	4,292	6,020	8,262	7,922
Cardamoms.....chts	234	571	380	518	717	778
Cocculus Indicus bgs, &c.	1,695	2,436	234	572	975	525
Colombo root.....pkgs	548	637	253	394	322	473
Cream of Tartar.....cks	83	112	237	289	266	261
Cubebs.....bgs	170	294	30	132	154	118
Dragonsblood.....chts	117	138	180	239	186	161
Galls, E.I.....cks & cs	5,399	3,162	10,321	7,306	8,057	5,488
Mediterranean.....cks	906	614	1,609	1,160	1,317	955
Gum—						
Ammoniac.....pkgs	473	483	134	184	146	189
Anini & Copal.....	6,103	8,493	5,327	11,655	7,337	8,006
Arabic, Barbary.....	1,276	1,021	2,445	2,763	2,273	2,748
" Turkey.....	459	469	1,370	1,442	1,384	1,255
E.I.....	1,792	2,172	4,647	3,771	5,424	3,215
Assafetida.....	311	302	403	467	394	517
Benjamin.....	1,147	964	1,873	1,763	1,690	1,406
Damar.....	1,445	1,093	3,190	1,985	2,838	3,046
Galbanum.....	19	35	—	15	16	12
Gamboge.....	167	166	377	288	376	331
Guaiacum.....	15	37	151	190	172	162
Kino.....	11	12	12	5	13	11
Kowrie.....tms	810	990	1,504	1,702	1,692	1,522
Mastic.....pkgs	161	124	95	42	58	28
Myrrh, E.I.....	127	260	223	451	260	428
Olibanum.....	1,298	2,967	6,883	8,181	8,542	6,658
Sandarac.....	1,233	478	2,283	1,548	1,528	1,586
Senegal.....tms	17	10	14	2	5	10
Tragacanth.....pkgs	1,057	197	2,570	867	1,733	729
Ipecacuanha.....cks & bgs	236	312	697	577	773	428
Jalap.....bls	453	534	209	345	293	458
Nux Vomica.....pkgs	4,269	1,247	7,435	1,846	4,420	2,107
Oil—						
Castor.....cks	3	—	35	4	41	4
".....tms	4,401	3,582	18,454	15,555	17,575	17,424
Palm.....tms	954	615	2,383	2,531	2,035	2,424
Cocanut.....	1,606	2,756	5,169	10,738	6,433	10,822
Olive.....cks, &c.	487	1,293	2,596	6,154	3,431	5,326
Aniseed.....cs	*41	237	520	575	667	557
Cassia.....	*197	733	7	703	196	376
Opium.....chts, &c.	1,139	1,654	—	—	—	—
Rhubarb.....chts	1,243	1,918	1,938	1,844	1,713	1,774
Sabaparrilla.....bls	915	1,222	2,030	2,579	2,340	2,492
Scenna.....bls, &c.	1,453	3,240	1,398	4,576	3,185	3,866
Shellac.....ch, &c.	43,353	39,674	37,506	44,816	33,825	32,044
Terra Japonica, Gambier tms	3,046	1,778	14,811	8,212	13,651	7,372
Cutch.....	3,291	2,289	4,247	2,151	3,287	2,579
Turnerite.....	1,735	1,087	3,647	2,447	2,990	1,995

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.		1879.		1878.	
ACIDS—		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 2½	0 0	0 2½	0 0
Citric	per lb.	2 0	2 1	2 4½	2 5
Hydrochloric	per cwt.	5 0	7 0	4 0	7 0
Nitric	per lb.	0 4½	0 0	0 4½	0 0
Oxalic	per lb.	0 4½	0 4½	0 5	0 0
Sulphuric	per lb.	0 0½	0 1	0 0½	0 1
Tartaric crystal ..	per lb.	1 4½	1 4½	1 4½	1 5
powdered ..	per lb.	1 4½	1 4½	1 4½	1 5
ANTIMONY ore	per ton	240 0	300 0	240 0	300 0
crude ..	per cwt.	32 6	0 0	37 0	0 0
star	per cwt.	50 0	51 0	51 0	0 0
ARSENIC, lump	per cwt.	25 0	0 0	26 0	0 0
powder	per cwt.	8 6	9 0	12 0	0 0
BRIMSTONE, rough ..	per ton	100 0	105 0	110 0	115 0
roll ..	per cwt.	9 6	10 3	9 6	10 6
flour	per cwt.	10 6	13 0	11 6	13 6
IODINE, dry	per oz.	1 1	0 0	0 10½	0 0
IVORY BLACK, dry ..	per cwt.	8 6	0 0	8 6	0 0
MAGNESIA, calcined ..	per lb.	1 10	0 0	1 10	0 0
MERCURY	per bottle	127 6	0 0	145 0	0 0
MINIUM, red	per cwt.	16 9	17 0	20 6	0 0
orange ..	per cwt.	28 6	0 0	33 0	0 0
PRECIPITATE, red ..	per lb.	3 3	0 0	3 7	0 0
white ..	per lb.	3 2	0 0	3 6	0 0
PRUSSIAN BLUE ..	per lb.	0 0	0 0	0 0	0 0
SALTS—					
Alum	per ton	120 0	122 6	119 0	142 6
powder	per ton	140 0	0 0	155 0	0 0
Ammonia:					
Carbonate	per lb.	0 6½	0 6½	0 5½	0 5½
Hydrochlorate, crude,	per ton	600 0	720 0	560 0	720 0
white ..	per ton	375 0	380 0	410 0	420 0
British (see Sal Am.)	per cwt.	75 0	82 0	75 0	95 0
Argol, Cape	per cwt.	52 0	70 0	67 0	73 0
Red	per cwt.	32 0	33 0	32 6	33 0
Oporto, red ..	per cwt.	60 0	65 0	61 0	65 0
Sicily ..	per cwt.	59 0	0 0	6 3	0 0
Ashes (see Potash and Soda)	per cwt.	27 0	31 0	0 0	0 0
Bleaching powder ..	per cwt.	35 6	36 6	36 0	37 6
Borax, crude	per lb.	2 10	0 0	3 2	0 0
British refined ..	per lb.	18 3	18 6	20 0	20 3
Copper:	per cwt.	50 0	55 0	55 0	60 0
Sulphate	per cwt.	2 3	0 0	2 7	0 0
Copperas, green ..	per lb.	102 6	103 0	99 0	100 0
Corrosive Sublimate p. lb.	per lb.	89 0	82 6	0 0	0 0
Cr. Tartar, French, p. cwt.	per cwt.	4 3	6 0	4 3	6 0
brown ..	per cwt.	3 0	4 6	3 0	4 6
Epsom Salts	per cwt.	11 0	20 0	11 0	20 0
Glauber Salts	per cwt.	47 6	0 0	47 6	0 0
Lime:	per cwt.	0 4½	0 0	0 4	0 0
Acetate, white, per cwt.	per cwt.	21 6	0 0	24 0	24 6
Magnesia; Carbonate ..	per cwt.	36 0	0 0	29 0	29 6
Potash:	per cwt.	0 6½	0 6½	0 7½	0 8
Bichromate	per lb.	0 11½	0 11½	0 10½	0 11
Carbonate:	per lb.	1 7½	1 8	0 0	0 0
Potashes, Canada, 1st	per cwt.	12 6	0 0	10 0	0 0
sort	per cwt.	12 3	0 0	9 9	0 0
Pearlashes, Canada, 1st	per lb.	0 6½	0 7	0 7	0 0
sort	per cwt.	41 0	45 0	42 0	43 0
Chlorate	per lb.	0 11½	0 11½	0 10½	0 11
Prussiate	per lb.	1 7½	1 8	0 0	0 0
red	per lb.	1 7½	1 8	0 0	0 0
Tartrate (see Argol and Cream of Tartar)	per cwt.	2 6	0 0	0 0	0 0
Potassium:	per cwt.	6 6	0 0	0 0	0 0
Bromide	per cwt.	16 0	16 6	13 6	14 0
Chloride	per cwt.	12 6	0 0	10 0	0 0
Iodide	per lb.	12 3	0 0	9 9	0 0
Quinine:	per lb.	0 6½	0 7	0 7	0 0
Sulphate, British, in	per oz.	41 0	45 0	42 0	43 0
bottles	per oz.	12 6	0 0	10 0	0 0
Sulphate, French ..	per lb.	12 3	0 0	9 9	0 0
Sal Acetos	per lb.	0 6½	0 7	0 7	0 0
Sal Ammoniac, Brit. cwt.	per cwt.	41 0	45 0	42 0	43 0
Saltpetre:	per cwt.	19 0	19 6	22 0	22 6
Bengal, 6 per cent. or	per cwt.	18 0	18 6	20 6	21 6
under	per cwt.	23 9	25 0	23 0	27 0
Bengal, over 6 per cent.	per cwt.	8 9	9 0	9 9	10 0
British, refined ..	per cwt.	0 11½	0 0	0 13½	0 13½
Soda; Bicarbonate, p. cwt.	per cwt.	60 0	62 6	72 6	0 0
Carbonate:	per cwt.	0 0	0 0	0 0	0 0
Soda Ash ..	per deg.	0 0	0 0	0 0	0 0
Soda Crystals per ton	per ton	13 6	14 0	15 0	15 3
Hyposulphite, per cwt.	per cwt.	38 0	0 0	37 6	0 0
Nitrate	per cwt.	26 6	0 0	26 6	0 0
SUGAR OF LEAD, White cwt.	per cwt.	26 6	0 0	26 6	0 0
Brown, cwt.	per cwt.	26 6	0 0	26 6	0 0
ULPHUR (see Brimstone)	per cwt.	26 6	0 0	26 6	0 0

		1879.		1878.	
		s. d.	s. d.	s. d.	s. d.
VERDIGRIS	per lb.	1 1	1 5	1 1	1 5
VERMILION, English	per lb.	2 5	0 0	2 8	0 0
China ..	per lb.	2 6	0 0	2 2	0 0
DRUGS.					
ALOE, Hepatic	per cwt.	80 0	160 0	70 0	180 0
Socotrine ..	per cwt.	75 0	200 0	85 0	200 0
Cape, good ..	per cwt.	41 0	42 6	47 0	51 0
Inferior ..	per cwt.	36 0	39 0	41 0	46 0
Barbadoes ..	per cwt.	60 0	190 0	40 0	160 0
AMBERGRIS, grey	per oz.	47 0	81 0	80 0	85 0
BALSAM—					
Canada	per lb.	0 10	0 11	1 0	0 0
Capivi	per lb.	1 4	1 8	1 4½	1 6
Peru	per lb.	4 8	4 9	4 10	0 0
Tolu	per lb.	2 9	3 0	5 9	6 0
BARKS—					
Canella alba	per cwt.	24 0	30 0	18 0	22 0
Casearia	per cwt.	17 0	24 6	15 6	23 0
Peru, crown & grey per lb.	per lb.	1 2	2 6	1 6	3 0
Calisaya, flat ..	per lb.	2 4	4 6	3 6	4 6
quill ..	per lb.	4 0	7 0	4 6	7 0
Carthagena ..	per lb.	2 0	4 6	1 9	3 0
Columbian ..	per lb.	1 0	6 0	2 9	5 7
E. 1.	per lb.	1 6	3 0	1 2	4 0
good & fine ..	per lb.	3 4	7 0	4 8	8 3
Pitayo	per lb.	0 6	3 2	0 6	1 6
Red	per lb.	3 0	8 0	3 3	5 0
Buchu Leaves	per lb.	0 2	1 3	0 2½	1 3
CAMPOR, China	per cwt.	81 6	93 0	80 0	0 0
Japan ..	per cwt.	0 0	90 0	82 6	0 0
Refin. Eng. per lb.	per lb.	1 4	0 0	1 2	1 2½
CANTHARIDES	per lb.	1 6	4 5	1 11	5 0
CHAMOMILE FLOWERS p. cwt.	per cwt.	40 0	80 0	50 0	200 0
CASTOREUM	per lb.	0 0	0 0	9 0	30 0
DRAGON'S BLOOD, l. p. cwt.	per cwt.	105 0	220 0	85 0	283 0
FRUITS AND SEEDS (see also Seeds and Spices).					
Anise, China Star per cwt.	per cwt.	80 0	85 0	92 6	102 6
Spanish, &c.	per cwt.	26 0	32 0	30 0	45 0
Beans, Tonquin	per lb.	4 6	7 6	1 9	5 0
Cardamoms, Malabar	per lb.	6 0	7 0	5 0	5 10
good ..	per lb.	2 0	5 10	1 6	4 5
inferior ..	per lb.	2 0	6 8	2 0	5 6
Aleppy ..	per lb.	2 8	4 6	2 2	3 6
Madras ..	per lb.	3 6	4 9	3 6	4 6
Ceylon ..	per lb.	55 0	57 0	81 0	90 0
Cassia Fistula	per cwt.	0 0	0 0	0 0	0 0
Castor Seeds ..	per cwt.	7 3	9 0	9 6	11 0
Coenulth Indictus ..	per lb.	0 8½	1 0	1 0	1 9
Colocyth, apple ..	per cwt.	31 0	32 6	26 0	27 6
Croton Seeds	per cwt.	37 0	49 0	29 0	0 0
Cubobs	per cwt.	43 0	50 0	20 0	32 0
Chummin	per cwt.	11 0	14 6	12 0	15 0
Dividivi	per cwt.	0 0	0 0	6 0	10 0
Fenagreek	per cwt.	29 0	30 0	28 0	0 0
Guinea Grains ..	per cwt.	0 0	0 0	6 6	9 0
Juniper Berries ..	per cwt.	7 0	11 0	9 0	14 0
Nux Vomica	per cwt.	12 0	19 0	0 0	0 0
Tamarinds, East India,	per cwt.	22 0	31 0	25 6	27 6
West India ..	per lb.	21 0	26 6	27 0	31 0
Vanilla, large	per lb.	12 0	19 6	15 0	26 0
inferior ..	per lb.	0 5½	0 6	0 4½	0 7
GINGER, Preserved, per lb.	per lb.	39 0	36 0	44 0	48 0
HONEY, Chili	per cwt.	35 0	41 0	38 0	43 0
Jamaica ..	per cwt.	0 0	0 0	0 0	0 0
Anstralian ..	per lb.	4 3	4 6	5 6	5 9
IPECACUANHA	per lb.	2 6	5 2	3 0	4 9
ISINGLASS, Brazil ..	per lb.	3 6	5 5	3 4	5 5
Tongue sort ..	per lb.	1 6	5 0	2 3	5 4
East India ..	per lb.	2 9	4 6	4 0	4 7
West India ..	per lb.	6 0	10 6	8 0	15 0
Russ, long staple	per lb.	0 0	0 0	0 0	0 0
inferior ..	per lb.	1 6	2 6	1 6	3 0
Simovia ..	per lb.	0 11	1 2	0 8	0 10
JALAP, good	per lb.	0 9½	0 10½	0 7	0 7½
infer. & stems ..	per lb.	0 0½	0 1½	0 1½	0 1½
LEMON JUICE	per degree	1 3	1 8	0 0	0 0
LIME JUICE	per gall.	0 0	0 0	34 0	39 0
LIQUORICE, Spanish per cwt.	per cwt.	0 0	0 0	0 0	0 0
Liquorice Root ..	per cwt.	0 0	0 0	3 6	4 0
MANNA, flaky	per lb.	0 0	0 0	1 4	1 6
small ..	per lb.	13 6	56 0	23 0	51 6
MUSK, Pod	per oz.	47 0	55 0	35 0	55 0
Grain	per oz.	2 0	0 0	1 8	0 0
OILS (see also separate list)					
Almond, expressed per lb.	per lb.	0 4½	0 5	0 4½	0 5
Castor, 1st pale ..	per lb.	0 4½	0 4½	0 4½	0 4½
second ..	per lb.	2 9	5 0	2 8	4 6
Cod Liver	per gall.	0 2½	0 2½	0 2½	0 2½
Croton	per cwt.	20 0	0 0	25 0	0 0
Essential Oils:	per lb.	9 9	10 0	6 7	6 9
Almond	per cwt.	0 0	0 0	65 0	79 0
Anise-seed	per lb.	0 0	0 0	10 0	15 0
Bay	per bottle	3 6	4 0	3 0	3 6
Bergamot	per lb.	0 0	0 0	9 0	9 3
Cajeput	per lb.	2 10	3 0	3 1	3 2
Caraway	per oz.	4 0	5 6	4 6	5 6
Cassia	per oz.	0 13½	0 13½	0 2½	0 3
Cinnamon ..	per lb.	0 3	0 0	0 2½	0 2½
Citronelle	per lb.	8 9	0 0	8 3	0 0
Clove	per lb.	0 2½	0 3	0 2½	0 3
Geranium ..	per lb.	0 3	0 0	1 8	7 0
Lavender	per lb.	0 0	8 2	5 0	8 6
Lemon	per oz.	0 2½	0 0	0 2½	0 3
Lemongrass	per oz.	0 2½	0 0	0 2½	0 3

1879.				1878.			
Essential Oils, continued:—							
Neroli.....per oz.	0 0	to	0 0	3 0	to	6 6	
Nutmeg.....	0 3 1/2	..	0 4	0 4 1/2	..	0 5	
Orange.....per lb.	5 0	..	7 0	4 3	..	7 0	
Otto of Roses.....per oz.	21 0	..	35 0	16 0	..	22 0	
Patchouli.....	1 6	..	3 0	1 9	..	3 0	
Peppermint:							
American.....per lb.	10 0	..	12 6	10 9	..	12 6	
English.....	21 0	..	23 0	24 0	..	25 0	
Rosemary.....	0 0	..	0 0	2 0	..	2 6	
Sassafras.....	2 0	..	2 3	2 3	..	2 6	
Spearmint.....	0 0	..	0 0	12 0	..	15 0	
Thyme.....	0 0	..	0 0	0 0	..	0 0	
Mace, expressed.....per oz.	0 6	..	0 7	0 6	..	0 10	
Opium, Turkey.....per lb.	15 0	..	17 0	16 6	..	18 0	
inferior.....	13 0	..	14 6	10 0	..	12 0	
QUASSIA (bitter wood) per ton	100 0	..	130 0	100 0	..	130 0	
RHUBARB, China, good and fine.....per lb.	1 6	..	3 6	2 6	..	3 0	
Mid. to ord.....	0 9	..	1 4	0 9	..	2 1	
Dutch Trimmed.....	0 0	..	0 0	0 0	..	0 0	
ROOTS.—Calumba.....per cwt.	35 0	..	60 0	25 0	..	50 0	
China.....	0 0	..	0 0	30 0	..	32 0	
Chiretta.....per lb.	0 0	..	0 0	0 3	..	0 4	
Galangal.....per cwt.	22 0	..	23 6	21 0	..	23 0	
Gentian.....	18 0	..	20 0	20 0	..	22 0	
Hellebore.....	0 0	..	0 0	0 0	..	0 0	
Orris.....	22 0	..	45 0	55 0	..	65 0	
Pellitory.....	0 0	..	0 0	70 0	..	76 0	
Pink.....per lb.	0 0	..	0 0	0 0	..	0 0	
Rhathany.....	0 2	..	0 5	0 4	..	0 8	
Seneka.....	2 4	..	2 10	3 0	..	3 6	
Snake.....	0 10	..	1 0	0 10	..	1 0	
SAFFRON, Spanish.....	20 0	..	40 0	30 0	..	32 0	
SALEP.....per cwt.	140 0	..	200 0	240 0	..	300 0	
SARSAPARILLA, Lima per lb.	0 4 1/2	..	0 6	0 0	..	0 0	
Guayaquil.....	1 3	..	1 5	2 2	..	2 6	
Honduras.....	1 0	..	1 4	0 11	..	1 6	
Jamaica.....	1 0	..	1 7	1 2	..	2 6	
SASSAFRAS.....per cwt.	9 0	..	11 0	9 0	..	11 0	
SCAMMONY, Virgin.....per lb.	0 0	..	0 0	24 0	..	30 0	
second & ordinary.....	0 0	..	0 0	6 0	..	22 0	
SENN, Bombay.....	0 0 1/2	..	0 2 1/2	0 1	..	0 4	
Tinnivelly.....	0 2	..	1 7	0 1	..	1 6	
Alexandria.....	0 4	..	1 6	0 5	..	2 0	
SPERMACEETI, refined.....	1 4	..	0 0	1 4	..	0 0	
American.....	1 3	..	0 0	1 3	..	0 0	
SQUILLS.....	0 2 1/2	..	0 4 1/2	0 2 1/2	..	0 3 1/2	
UMS.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	
AMMONIACI drop.....per cwt.	2 0	..	2 2	1 18	..	2 0	
lump.....	0 15	..	1 18	0 15	..	1 15	
ANIMI, fine washed.....	13 15	..	15 0	12 10	..	13 10	
bold scraped.....	12 0	..	13 10	9 15	..	12 0	
sorts.....	9 2/6	..	11 17/6	6 0	..	9 10	
dark.....	5 0	..	8 10	4 10	..	6 12/6	
ARABIC, B.L., fine							
pale picked.....	2 15	..	3 5	3 0	..	3 16	
strs., md. to fin.....	2 2	..	2 14	2 5	..	2 17	
garblings.....	1 4	..	2 0	1 10	..	2 0	
TURKEY, pick. gd. to fin.....	5 10	..	9 0	6 0	..	9 10	
second & inf.....	3 5	..	5 5	3 0	..	5 15	
in sorts.....	2 5	..	2 10	2 10	..	3 16	
Gedda.....	1 10/6	..	1 14	1 14	..	3 0	
BARBARY, brown.....	2 16	..	3 0	0 0	..	0 0	
AUSTRALIAN.....	1 15	..	2 10	1 19	..	2 12	
ASSAFETIDA, cm. to fin.....	1 8	..	3 0	0 15	..	2 0	
BENJAMIN, 1st & 2nd	21 0	..	70 0	45 0	..	80 0	
Sunnatra 1st & 2nd	6 10	..	14 12/6	5 17/6	..	14 0	
3rd.....	2 10	..	3 12/6	2 4	..	5 10	
COPAL, Angola red.....	0 0	..	0 0	6 0	..	6 15	
Benguela.....	0 0	..	0 0	4 0	..	5 0	
Sierra Leone, per lb.	0 7 1/2	..	0 10	0 6 1/2	..	0 9	
Manilla.....per cwt.	16 0	..	25 0	18 0	..	27 0	
DAMMAR, pale.....	72 0	..	72 6	75 0	..	80 0	
Singapore.....	55 0	..	65 0	75 0	..	78 0	
EUPHORBUM.....	0 0	..	0 0	9 0	..	15 0	
FALBANUM.....per lb.	0 5	..	1 0	0 9	..	1 3	
FAMBOGE, pckd. pipe per cwt.	210 0	..	275 0	190 0	..	270 0	
HUAIACUM.....per lb.	1 0	..	2 0	1 8	..	2 5	
CINO.....per cwt.	65 0	..	90 0	81 0	..	85 0	
COWRIE, sorts.....	20 0	..	45 0	24 0	..	43 0	
selected.....	122 6	..	172 6	100 0	..	170 0	
MASTIC, picked.....per lb.	3 0	..	3 6	4 0	..	5 0	
MYRRH, gd. & fine per cwt.	150 0	..	172 0	152 6	..	240 0	
ord. to fair.....	61 0	..	147 6	80 0	..	130 0	
OLIBANUM, p. drop	59 0	..	66 0	43 0	..	48 0	
amber & ylw.....	40 0	..	54 0	34 0	..	43 0	
garblings.....	15 0	..	35 0	15 0	..	29 0	
ENEGAL.....	61 0	..	0 0	60 0	..	65 0	
IAN DARAC.....	63 0	..	110 0	87 0	..	105 0	
SHELLAC, Orange.....	70 0	..	87 0	68 0	..	86 0	
Liver.....	65 0	..	69 0	65 0	..	75 0	
THUS.....	20 0	..	21 6	20 0	..	21 6	
TRAGACANTH, leaf	240 0	..	400 0	240 0	..	400 0	
in sorts.....	65 0	..	175 0	25 0	..	175 0	
CLS.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	
SEAL, pale.....per tun	28 10	..	29 0	31 0	..	0 0	
yellow to tinged.....	25 0	..	28 0	30 10	..	33 0	
brown.....	24 0	..	26 0	29 0	..	30 0	
PERM.....	69 0	..	0 0	76 0	..	0 0	
ODY.....	0 0	..	0 0	0 0	..	0 0	
.....	28 0	..	0 0	33 0	..	0 0	

Oils, continued:—				1879.				1878.			
WHALE, South Sea, pale, per tun				29 0	to	£	0 0	35 0	to	£	0 0
yellow „				27 0	..	28	0	33 0	..	34	0
brown „				25 0	..	26	0	39 0	..	31	0
East India, Fish „				0 0	..	0	0	25 10	..	0	0
OLIVE, Gallipoli „ per ton				0 0	..	0	0	0 0	..	0	0
Gioja „				0 0	..	0	0	0 0	..	0	0
Levant „				43 0	..	43	10	48 10	..	49	0
Mogador „				0 0	..	0	0	48 0	..	0	0
Spanish „				45 0	..	46	0	49 10	..	0	0
Sicily „				0 0	..	0	0	49 0	..	0	0
COCOANUT, Cochinn „				46 0	..	0	0	44 0	..	44	10
Ceylon „				44 10	..	0	0	38 10	..	38	15
Manritius „				44 0	..	0	0	39 0	..	40	0
GROUND NUT AND GINGELLY:											
Bombay „				0 0	..	0	0	0 0	..	0	0
Madras „				0 0	..	0	0	0 0	..	0	0
PALM, fine „				36 0	..	0	0	40 10	..	0	0
LINSEED „				24 5	..	24	10	27 0	..	28	10
RAPESEED, English, pale „				32 0	..	32	5	38 0	..	38	5
brown „				30 0	..	39	5	36 0	..	36	5
Foreign, pale „				0 0	..	0	0	40 10	..	0	0
brown „				0 0	..	0	0	0 0	..	0	0
COTTONSEED „				26 10	..	0	0	31 10	..	0	0
LARD „				35 0	..	36	0	50 0	..	0	0
TALLOW „				31 0	..	35	0	30 0	..	54	0
TURPENTINE, American, cks.				s. d.		s. d.		s. d.		s. d.	
French „				21 6	..	0	0	21 6	..	0	0
PETROLEUM, Crude „				0 0	..	0	0	0 0	..	0	0
refined, per gall.				0 10	..	0	10 1/2	1 9 1/2	..	0	0
Spirit „				0 11 1/2	..	1	1	0 7 1/2	..	0	9 1/2
SEEDS.											
CANARY „ per qr.				47 0	..	57	0	44 0	..	51	6
CARAWAY, English per cwt.				1 0	..	0	0	43 0	..	45	0
German, &c „				0 0	..	0	0	48 0	..	49	0
CORIANDER „				15 0	..	20	0	18 0	..	23	0
HEMP „ per qr.				39 0	..	41	0	0 0	..	0	0
LINSEED English „				60 0	..	63	0	0 0	..	0	0
Black Sea & Azof „				45 9	..	46	6	0 0	..	0	0
Calcutta „				46 0	..	46	6	50 9	..	50	0
Bombay „				46 0	..	46	6	52 6	..	0	0
St. Petersburg „				45 0	..	47	9	50 0	..	51	0
Mustard, brown „ per bshl.				0 0	..	0	0	0 0	..	0	0
white „				9 0	..	12	6	13 0	..	16	0
POPPY, East India, per qr.				48 0	..	48	6	49 0	..	0	0
SPICES.											
CASSIA LIGNEA „ per cwt.				38 0	..	50	0	43 0	..	60	0
Vera „				22 0	..	36	0	22 0	..	45	0
Buds „				53 0	..	54	0	70 0	..	73	0
CINNAMON, Ceylon:											
1st quality „ per lb.				1 4	..	3	3	2 2	..	3	6
2nd do. „				1 2	..	2	4	2 0	..	2	9
3rd do. „				1 1	..	1	8	1 9	..	2	3
Tellicherry „				1 6	..	2	4	2 4	..	2	7
Culps „				0 2 1/2	..	0	5	0 3 1/2	..	0	6 1/2
CLOVES, Penang „				1 8	..	1	10	1 11	..	2	2
Amboyna „				1 4	..	1	5	1 4	..	1	7
Zanzibar „				1 3 1/2	..	1	4 1/2	1 2	..	1	3
GINGER, Jam., fine per cwt.				90 0	..	200	0	91 0	..	202	6
Ord. to good „				52 0	..	80	0	53 0	..	90	0
African „				21 0	..	22	0	21 0	..	0	0
Bengal „				16 6	..	0	0	21 6	..	22	6
Malabar „				0 0	..	0	0	26 0	..	28	0
Cochin „				46 0	..	125	0	50 0	..	115	0
PEPPER, Bk., Malabar, per lb.				0 3 1/2	..	0	4 1/2	0 4 1/2	..	0	5 1/2
Singapore „				0 3 1/2	..	0	3 1/2	0 3 1/2	..	0	3 1/2
White Tellicherry „				0 0	..	0	0	0 10	..	1	4
Cayenne „				1 4	..	3	1	1 4	..	3	0
MACE, 1st quality „				1 8	..	2	6	2 2	..	3	3
2nd and inferior „				1 0	..	1	7	1 0	..	2	1
NUTMEGS, 78 to 60 to lb.				3 8	..	5	0	3 11	..	5	0
90 to 80 „				2 19	..	3	7	3 2	..	3	10
132 to 95 „				1 10	..	2	9	2 0	..	3	1
PIMENTA „				0 5	..	0	0	0 4 1/2	..	0	4 3/2
VARIOUS PRODUCTS.											
COCHINEAL—											
Honduras, black „ per lb.				2 0	..	2	5	2 2	..	2	6
silver „				2 0	..	2	3	1 11	..	2	1
pasty „				0 0	..	0	0	1 10	..	0	0
Mexican, black „				2 0	..	0	0	2 0	..	2	1
silver „				1 10	..	1	11	1 11	..	2	0
Teneriffe, black „				1 11	..	2	10	2 0	..	2	11
silver „				2 0	..	2	1	1 10	..	2	0
SOAP, Castile „ per cwt.				26 0	..	33	0	33 0	..	34	10
SOY, China „ „ gall.				2 5	..	2	5 1/2	2 6	..	0	0
TERRA JAPONICA—											
Gambier „ per cwt.				17 6	..	17	9	18 3	..	18	6
Free cubes „				25 0	..	27	0	27 6	..	29	0
Cutch „				21 0	..	24	0	23 0	..	25	0
WAX, BEES, English „				£9 0	..	£9	0	£9 0	..	0	0
Jamaica „				6 10	..	7	15	7 5	..	7	15
East India „				6 0	..	6	10	0 0	..	0	0
VEGETABLE, Japan „				3 0	..	3	5	2 10	..	2	11
WOOD, DYE, Bar „ per ton				3 10	..	3	12 6	3 5	..	3	10
Brazil „				0 0	..	0	0	14 0	..	29	0
Cam „				18 0	..	23	0	18 0	..	33	0
Fustic, Cuba „				0 0	..	0	0	8 0	..	8	10
Jamaica „				6 15	..	7	10	5 0	..	5	10
LOGWOOD, Campeachy „				8 5	..	8	10	8 15	..	9	5
Honduras „				6 10	..	7	0	6 10	..	6	15
St. Domingo „				5 15	..	6	5	5 10	..	6	5
Jamaica „				5 5	..	5	15	5 5	..	5	15
LIMA, first pile „				10 0	..	11	0	9 10	..	10	0
RED SANDERS „				6 10	..	7	0	6 0	..	6	5



Agar.—Chinese Gelatine.—This substance was imported in large quantities some years back, but comparatively no market could be found for it. A large portion of the importations have been, we believe, returned to China. We have made inquiries concerning it, and believe you can get what you want from Mr. J. W. Hart, isinglass merchant, of 5 St. Mary Axe. This gelatine, we are informed, makes an excellent jelly, but will not retain that condition on the addition of the least spirituous adjunct.

W. W. C.—Orange Quinine Wine.—Subjoined is the text of the Inland Revenue Order, officially issued as instructions to excise officers last June. We have several times had to refer to this, but have not previously published it:—"Orange wine compounded with sulphate of quinine in the proportion of one grain of quinine in every ounce of such wine, having been described in the British Pharmacopoeia as a medicine, and, as wine so compounded is no longer fit to be used as a beverage, no objection should be offered to its being sold by druggists, without any license. If, however, any druggist sell such medicated wine labelled or described as a patent or proprietary medicine, he must affix the proper stamp to each bottle, and hold a medicine license. And if any such wine be sold (whether labelled as a medicine or not), which does not contain at least one grain of quinine in every ounce, the usual Excise Sweets License and Magisterial Certificate will be necessary. Should it appear that any wine said to be medicated is recommended to be used instead of ordinary wine, or to be drunk in quantities inconsistent with the fact of its containing the required proportion of quinine, samples should be sent to the laboratory at this Office for analysis and the facts reported to the Board."

6/69. *Iodine Manufacture. Herland Process.*—We will inquire for the work you mention, but if, as we suspect, the process has only been described in a magazine article, we would advise you to write to the office of *Les Comptes Rendus de l'Académie des Sciences*, Paris, and ask them to supply you with the number in which the account appeared. The only guide as to date we can give you is that the article was copied, in whole or in part, in the *Moniteur des Produits Chimiques* for January 23, 1877, so it must have been published before that date.

13/238. *Colza Oil, Test for.*—A. B. It is always difficult to distinguish vegetable oils from each other by chemical tests, and the difficulty is increased tenfold when two or more kinds are mixed together. Colza or refined rape oil generally answers the following tests:—1. 5 vols. of oil mixed with 1 vol. potash lye, sp. gr. 1.34, and strongly agitated, should yield a pink mass. 2. Mix in a beaker 1 vol. of the oil and 1 vol. of red fuming nitric acid; a middle zone forms which is brown red, and greenish below. 3. Mix in a beaker or test-tube 10 drops of oil with 2 drops concentrated sulphuric acid; the layer where the oil and acid meet should be a beautiful green with brown stripes. 4. Agitate together equal volumes of oil and strong sulphuric acid; the mixture should be a fine dark green. If the oil answers two or more of these tests it may be passed as true colza oil, but even if it does not respond to one of them it will hardly be safe to condemn it. As regards the second part of your question, we have generally found that the last 3 or 4 gallons of a large cask were thick and almost solid, and we have always found it necessary during the winter months to warm the storeroom in which it was kept by artificial heat, to prevent the whole of it becoming too thick to flow from the tap. Colza oil is made from the seeds both of *Brassica campestris* var. and *Brassica napus*. The solidifying, or, rather, liquefying points of these oils is said to differ by no less than 34° C. That from *Brassica napus* when frozen liquefies at 60° C., and that from *B. campestris* at 40° C. The former temperature corresponds to 23° Fahr., a point far above the temperature of many nights during the past month or two.

71/6. *Pomade, Golden Colour for.*—We have tried several methods of giving pomade a nice golden colour. Palm oil is unsatisfactory, not only because it fades quickly and is sometimes difficult to obtain of a good colour, but it turns rancid very readily, and starts the change in the pomade. Gamboge is a really good colouring matter. You may rub sufficient of the powder with a little of the pomade, and then add it to the bulk; or, put a quantity of the powder into a dry bottle, and pour over it a quantity of almond oil. Allow it to stand for a few weeks, shaking it occasionally. The oil will take a very deep golden yellow colour, and can be used for tinging the pomade in any desired quantity. A considerable proportion of the gamboge is not dissolved by the oil, but this is simply colourless gum. Oil may be poured over the gamboge as long as it yields any colour. We have never reduced this latter method to figures, but we think it would be a good plan to percolate the powder with the oil in fixed proportions, and it would then be easy to make the pomade always of the same tint.

36/2. *Varicose Vein, Itching of.*—"E. K. C." writes to us as follows:—"Persons troubled with varicose veins often suffer from an intolerable itching, which induces them to scratch the part, and thus lacerate the skin. Were they gently to rub in a solution of vinegar and salt they would find almost immediate relief. I think the solution might be used as a styptic in slight bleeding, and might be used advantageously in bruises and sprains.

A woman who keeps fowls had one lamed by a stone which was thrown at it, so that it could not put its foot to the ground. I recommended her to rub in vinegar and salt. She followed my advice, and before the day was out the fowl was walking about at its ease. Diluted with water, the solution might be tried to cleanse sores, to relieve headache, to gargle sore throat, to cool the skin in fevers, and to allay the irritation arising from the eruption of small pox."

35/2. *Hair Oil Perfume.*—"E. B." Swansea.—The perfume of hair oil is so entirely a matter of fancy that it is generally best to leave it to the discretion of the retailer. Otto of roses may be used in the proportion of 16 drops to a pint of oil, or half this quantity may be replaced by oil of bergamot or lemons. Essence of bergamot alone is much liked by some people. For a very cheap article you may use 6 drops of citronella, the same of common oil of lavender and essence of bergamot to the pint of oil. Beyond this we do not think we can tell you much more than you know yourself.

18/3. *Phormio* writes: "Can you recommend good formule for (1) gingerette, and (2) polishing reviver, clear?"

239/2. *The Drachm Weight.*—H. D.—The only drachm weight which can now be legally used in any transaction, except the retailing of drugs, is the sixteenth part of the avoirdupois ounce, or 26.6 grains. For the compounding and retailing of medicines the apothecaries' drachm of 60 grains may be still used. As you remark, the Pharmacopoeia does not mention the avoirdupois drachm.

230/52. *Orpiment, Analysis of (Student).*—Your difficulty with the analytical reactions for insoluble sulphides, given on page 339 of Attfield's "Chemistry" (6th edition), is probably that you consider the whole to be a single operation. Two distinct tests are given, each of which is simple and easily intelligible. You will be able to prove the presence of arsenic and sulphur in orpiment as follows: Dissolve the orpiment in potassic or sodic hydrate. The solution ought to take place readily. Then add an excess of dilute hydrochloric acid. Sulphuretted hydrogen will be given off, and sulphur may be precipitated, but this is not likely. The solution may then be tested for arsenic in any convenient way. "Attfield" is one of the best works on analysis you can have at present. It may seem very slow work to plod through all the reactions of the metals and acids before you can attack such a compound as orpiment, but nowadays Pegasus has to work for his wages.

230/65. *Browning for Gun Barrels.* Centaur.—"Perhaps some of your correspondents would give a genuine and reliable recipe for browning laminated steel gun barrels; not a rusty or muggy, but a rich brown stain." The following we have received as a good browning for gun barrels, but as we believe in the motto, "Let the shoemaker stick to his last," we have never tried it practically:—Tr. ferri mur., 4 parts; rectified spirits, 4; sp. aeth. nit., 2; acid nitric dil., 2; cupri sulph., 8. Another formula is as follows:—Tr. ferri mur., 4; rectified spirit, 4; nitric acid, 1; copper sulphate, $\frac{1}{2}$; corrosive sublimate, 1; water, 160. In using both these there are probably precautions to observe and details of treatment having no apparent reason, but which have an important influence on the result, and can only be learnt by practice. We shall be glad to hear the experience of our readers.

Belladonna in Chicory.—Dashaway writes:—Has belladonna ever been detected in chicory? I frequent a London coffee-house where the coffee sold is the strongest I ever met with. On two or three occasions after drinking the coffee, before I have been able to finish the regulation "roll and butter," my throat has become so dry that swallowing has been impossible. I know that the coffee is mixed with chicory, and the difficulty of swallowing is so characteristic a symptom of mild belladonna poisoning that I have been led to speculate on the possibility of belladonna roots becoming mixed with the chicory. I have had no opportunity of examining my eyes at the time, so I do not know if the pupils were dilated.

Garnets and Pomegranates.—"Incredulous" says: I see in Simmonds' "Commercial Dictionary" (the edition of 1867) that garnet is defined as, among other things, "a precious stone of a beautiful red colour like the seed of the pomegranate; whence the name." Is this correct? We think not, and for this reason: that the seeds of the pomegranate are not red but white, and also because their shape is very much unlike that of garnet. It is quite certain that the word garnet is connected with granatum and granum, but we cannot, at the moment, put our hands on the real etymology. E. B. Tylor, in a lecture delivered at the London Institute on January 13, showed that we owe our English word bannister to balustron, the Greek name of the pomegranate flower. The Italian equivalent of balustron is balustrà. The small pillars used to fence the landings of staircases have a considerable resemblance to inverted flowers of the pomegranate, and the Italian word was, in point of fact, applied to both. The word in English originally, and still occasionally used, is balister, and as this is difficult to pronounce, it was converted into bannister.

6/72. *M. P. S.*—The use of the title "Surgeon-dentist" would not, we believe, be considered in contravention to the law for a person registered under the Dentists Act, so long, at any rate, as the words are connected with the hyphen. We are informed by a dentist that this question was decided in the law courts some 15 or 20 years ago, but we are sorry to say we cannot give the reference. We do not, however, think it fair, morally, to use the title, inasmuch as the term "dentist" covers all that it can be truthfully desired to express, and the addition of "surgeon" may mislead. There is, of course, no guarantee that the College of Surgeons may not at any time think well to bring the question before a law court.


A letter from Grimsby, dated January 7, has been received, but as the information it contains is not authenticated by any name, we have not thought fit to use it.

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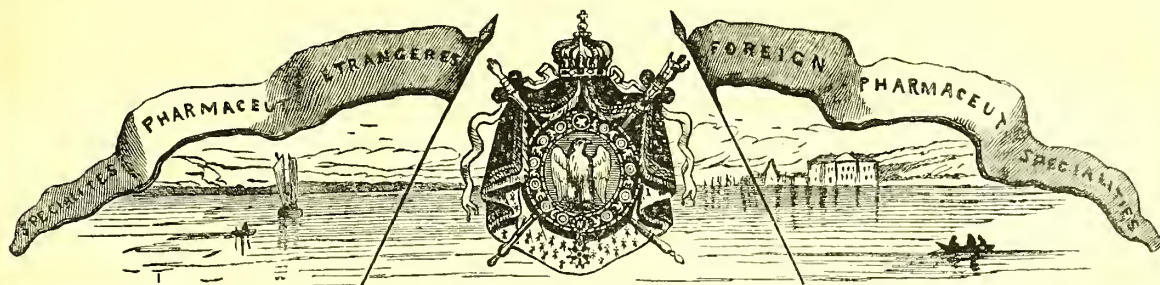
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1/9.. " Lezenges	13/	4/6.. " Wines36/	2/3.. Ditto15/	2/0..Star Paper15/
4/6..Blancard's Pills30/	5/0..Eau Botot42/	1/9..Pâte Aubergier13/	2/6..Tamar Indien21/
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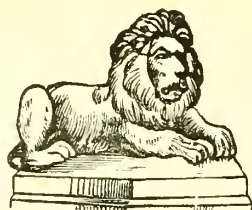
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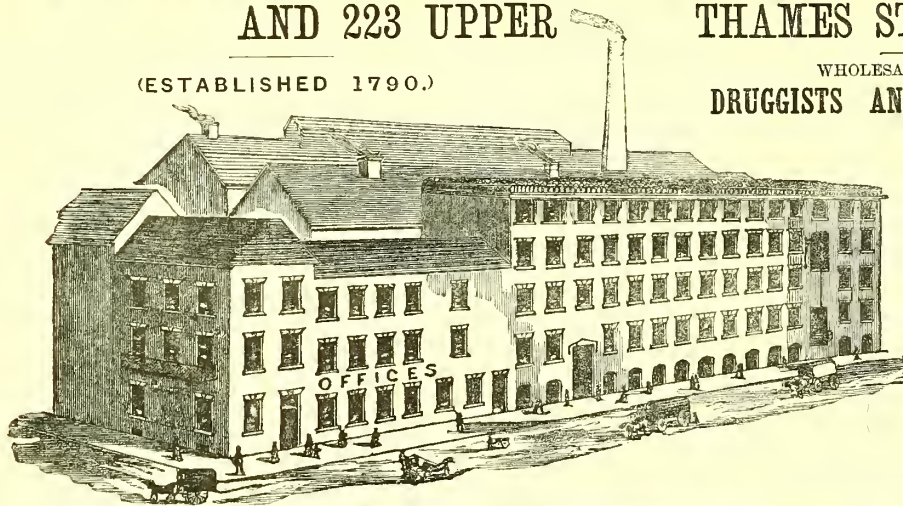
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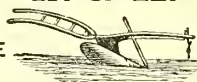
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No. 213. Phosph. pur. gr. 1-20th	In each pill.	No. 500. Phosph. pur. gr. 1-100th	In each pill.	No. 217. Phosph. pur. gr. 1-30th	In each pill.	No. 501. Phosph. pur. gr. 1-50th	In each pill.
No. 211. Phosph. pur. gr. 1-30th	In each pill.	No. 216. Phosph. pur. gr. 1-50th	In each pill.	Ferrum Redact. " iij.		Ext. Nuc. Vom. Alc. gr. 1	
No. 214. Phosph. pur. gr. 1-50th	In each pill.	Ferrum Redact. " iv.		No. 220. Phosph. pur. gr. 1-100th	In each pill.	No. 502. Phosph. pur. gr. 1-30th	In each pill.
The above forms are neatly put up in Bottles, containing three, six, and twelve dozen pills in each.				Ext. Nuc. Vom. Alc. gr. 1		Ext. Nuc. Vom. Alc. gr. 1	
WHOLESALE PRICES, 18s., 27s., and 42s. per dozen hottles.				RETAIL PRICES, 2s. 6d., 3s. 6d., and 5s. each hottle.			

No. 503.			No. 504.			No. 515.					
Phosph. pur. gr. 1-30th			Phosph. pur. gr. 1-50th			Phosph. pur. gr. 1-50th			These forms are neatly put up in		
inci Valer. " j.			Zinci Valer. " j.			Zinci Valer. " j.			Bottles, containing three, six, and		
In each pill.			In each pill.			In each pill.			twelve dozen pills in each.		
WHOLESALE PRICES, 20s., 32s., and 48s. per dozen hottles.						RETAIL PRICES, 2s. 9d., 4s., and 6s. each bottle.					

No. 218. Phosph. pur. gr. 1-30th	In each pill.	No. 514. Phosph. pur. gr. 1-30th	In each pill.	No. 517. Phosph. pur. gr. 1-30th	In each pill.	These forms are neatly put up in Bottles, containing three, six, and twelve dozen pills in each. WHOLESALE PRICES, 24s., 36s., and 60s. per dozen hottles. RETAIL PRICES, 3s., 4s. 6d., and 7s. each bottle.	
errum Redact. " iij.		Morphie Mur. " 1-10th		Quinine Sulph. " j.			
uinie Sulph. " ss.		Zinci Valer. " j.		Ext. Nuc. Vom. Alc. " j.			
No. 219. Phosph. pur. gr. 1-50th	In each pill.	No. 516. Phosph. pur. gr. 1-30th	In each pill.	Alcin " j.			
errum Redact. " iij.		Alcin " j.		No. 518. Phosph. pur. gr. 1-50th	In each pill.		
uinie Sulph. " ss.		Ext. Nuc. Vom. Alc. " j.		Ext. Nuc. Vom. Alc. " j.			
trychnia. " 1-50th				Ext. Aloes Aquos " j.			

No. 222. Phosphorus pur. gr. 1-50th	In each pill.	These forms are neatly put up in Bottles, containing three, six, and twelve dozen pills in each. WHOLESALE PRICES, 30s., 42s., and 66s. per dozen hottles. RETAIL PRICES, 3s. 6d., 5s., and 7s. 6d. each bottle.		No. 505. Phosphorus pur. gr. 1-50th	In each pill.
trychnia " 1-100th				Zinci Valer. " j.	
rt. Cannabis Ind. " 1-8th				Ferri Sulph. " j.	
				Quinine Sulph. " ss.	

No. 212.		No. 215.		No. 221.		No. 430.	
Phosph. pur. gr. 1-50th	} <i>In each pill.</i>	Phosph. pur. gr. 1-30th	} <i>In each pill.</i>	Phosph. pur. gr. 1-50th	} <i>In each pill.</i>	Phosph. pur. gr. 1-30th	} <i>In each pill.</i>
Quiniae Sulph. " j.		Quiniae Sulph. " j.		Ex. Nuc. Vom. Alc. " $\frac{1}{4}$		Quinine Sulph. " j.	
				Quinine Sulph. " j.		Ferri Sulph. " j.	
						Ex. Nuc. Vom. Alc. " $\frac{1}{4}$	
These forms are neatly put up in Bottles, containing three, six, and twelve dozen pills in each.							
WHOLESALE PRICES, 32s., 46s., and 78s. per dozen bottles.				RETAIL PRICES, 3s. 9d., 5s. 6d., and 8s. 6d. each bottle.			

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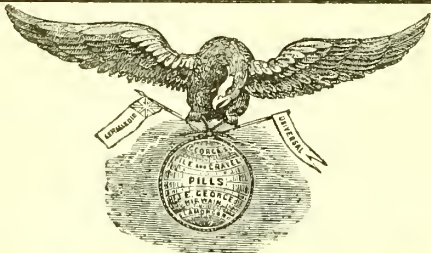
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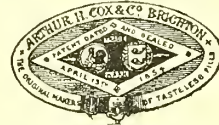
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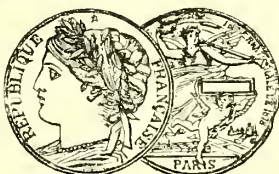


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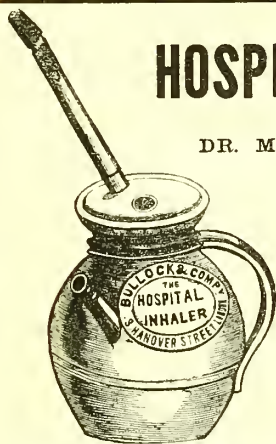
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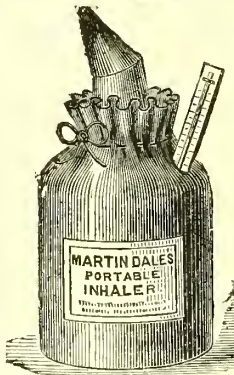
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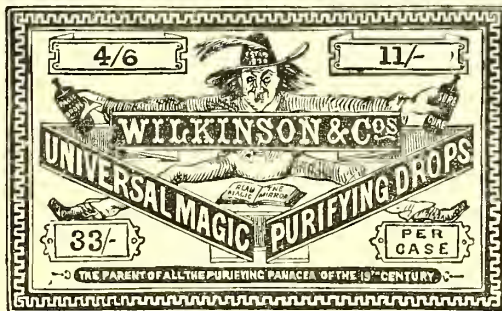
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Is beneficial in cases of weakened or diseased digestion, in obstinate catarrhs and coughs, hoarseness, catarrhal diseases of the bronchial tubes, in cases of incipient and progressive tubercular consumption, and in cases of bodily weakness and exhaustion.

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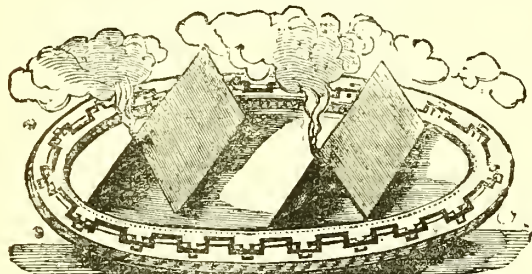
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This remedy is advertised in the *Lancet* and *British Medical Journal*; it is therefore known to members of the Medical Profession, by whom it is recommended.

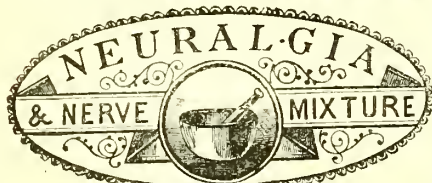
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Dr. J. COLLIS BROWNE'S CHLORODYNE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London.	Giles & Son,	Clifton.	Oldham, G., & Co.,	Dublin.
Allen, Hanbury & Co.,	"	Goulding, Messrs.	Cork.	Parsons & Richardson,	Leicester.
Baiss Brothers,	"	Gratton & Co.,	Belfast.	Peake, Allen & Co.,	Dublin.
Banks & Richards,	Birmingham.	Grimwade, Ridley,	London.	Raimes & Co.,	Liverpool.
Barron, Harvey & Co.,	London.	Grindley & Son,	Chester.	Raimes & Co.,	York.
Bell, John, & Co.,	"	Hearon, Squire & Francis,	London.	Raimes, Blanshards & Co.,	Edinburgh.
Corbyn & Co.,	"	Holkinson, Tonge & Stead,	"	Sang & Barker,	"
Cox & Gould,	"	Hopkins & Williams	"	Sanger, J., & Sons,	London.
Curling & Co.,	"	Hunt & Co.,	Exeter.	Sim, James, & Co.,	Aberdeen.
Curtis & Co.,	"	Hunt, A., & Co.,	"	Smeeton, W.,	Leeds.
Davy, M'Murdo & Co.,	"	Johnson, J. H. & S.,	Liverpool.	Southall & Co.,	Birmingham.
Drew, Barron & Co.,	"	Langton, W., & Co.,	London.	Sutton, W., & Co.,	London.
Drew, B., & Alexander,	"	Lynch & Co.,	"	Tomlinson, Hayward & Co.,	Lincoln.
Dunn & Company,	"	Mander, Weaver,	Wolverhampton.	Treacher, Hodgkinson & Co.,	"
Edwards, W.,	"	Marsden & Sons,	London.	Westrup, J. B.,	Kensington.
Evans, Lescher & Evans,	"	Maw & Son,	"	Westwood & Hopkins,	Lincoln.
Ferris & Co.,	Bristol.	Meggeson & Co.,	"	Woolley, James,	Manchester.
Foulger, S., & Son,	London.	Mackay, John,	Edinburgh.	Wyleys & Brown,	Coventry.
Frazer & Green,	Glasgow.	Morson, T., & Son,	London.	Yates & Co.,	London.
Gale & Co.,	London.	Newbery & Sons,	"		

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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Mr. HORROX, Chemist, Mildenhall, writes to say:—"One of my customers says your Balsam is worth sixpence a drop."

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RICHARDSON'S COMPACT MEDICINE CHEST.—This elegant little Chest has been specially designed for the use of Colonists, Clergymen, Heads of Families, Missionaries, and others engaged in benevolent work. Each Chest is fitted with twelve varieties of Coated Pills, prepared according to the directions of Dr. Spencer Thompson, and a bottle of Chlorodyne. It also contains "The Handbook for Compact Medicine Chest," written expressly for it by Dr. Spencer Thompson, giving full directions for the use of the Medicines, together with a considerable amount of valuable information upon Diet, &c., &c.

EKYN'S PORTABLE MEDICINE CASE.—This will be found most useful for Travellers, Emigrants, and Country Residents. It contains six bottles of Coated Pills and a bottle of Chlorodyne; an assortment of Medicines for the cure and relief of all ordinary ailments. It also contains a Card describing each of the Medicines, their uses and effects, and a brief description of all simple ailments, with their proper treatment. It is intended as a cheaper Case than the above Compact Medicine Chest.

RICHARDSON'S EMERGENCY CASES, OR POCKET PHARMACIES.—The above elegant and compact Cases will be found most useful to Country Practitioners and Colonial Surgeons, for whom they are more especially designed, containing, as they do, a carefully-selected List of Formulae, enabling the medical attendant to prescribe a remedy on the spot, thus saving the tedium of some hours' delay in obtaining the necessary medicines. The Cases can be had empty for those who may prefer to use their own selected remedies. We make six different sizes, viz.:—No. 1 contains 6 bottles Coated Pills; No. 2 contains 8 bottles Pills; No. 3 contains 12 bottles Pills; No. 4 contains 6 bottles Pills and 4 bottles Liquids; No. 5 contains 24 bottles Pills; No. 6 contains 12 bottles Pills and 9 bottles Liquids.

RICHARDSON'S PHOSPHORUS PILL CASES.—Similar in design to the above. We make four different sizes, containing from 6 to 24 bottles of simple and compound Phosphorus Pills.

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THE ORIGINAL AND ONLY TRUE.

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It is one of those preparations so well known as having something in its composition which defies the imitator, and makes it an invaluable remedy. No other remedy known can be exhibited with so much confidence as a **SEDATIVE**, an **ANTI-SPASMODIC**, an **ASTRINGENT**, an **ANODYNE**, or **DIAPHORETIC**.

In its composition and effect it bears no resemblance to any of the many formulæ published, but has curative and chemical properties peculiarly its own, nor is there any analytical test for it. It has been found by the Profession and large numbers of the public to succeed after all imitations had failed, and maintains its unaltered position as the only reliable **CHLORODYNE**.

The following are presented as specimens of the many communications received by R. F. :—

From **JOHN TANNER, M.D., L.R.C.P., M.R.C.S., L.S.A., L.M.,**
Physician to the Farringdon Dispensary.

"It gives me great pleasure to bear testimony in favour of **FREEMAN'S Chlorodyne**. I have prescribed it extensively, and find it in every respect far superior to any of the spurious compounds sold under the name of Chlorodyne. In cases of Asthma, Chronic Bronchitis, the last stage of Phthisis, and the Winter Cough of the Aged, I have never found any substitute or chemical combination its equal; moreover, in all cases where a sedative is required, it is a certain, safe, and agreeable remedy."

From **DAVID EASTON, M.D., B.A., L.R.C.S.,** Medical Officer to the Rhins of Galloway Poorhouse, Stranraer, Wigtownshire, Scotland.

"I consider your Chlorodyne a valuable remedy. It has succeeded perfectly in those cases in which I have used it. In its action it is uniform, and in its effects most efficacious."

From **C. SWABY SMITH, M.R.C.S. Eng., L.S.A.,** Surgeon to the Berks and Hants Extension Railway Works and Pewsey Union; Author of "On the Treatment of Diphtheritic Sore Throat," &c.

"Having been in the habit of using Mr. **FREEMAN'S Chlorodyne** for some time past, I have much pleasure in stating that it has never failed to have the desired effect in whatever case it has been administered."

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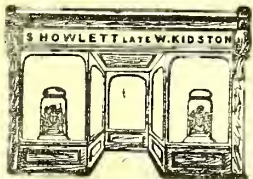
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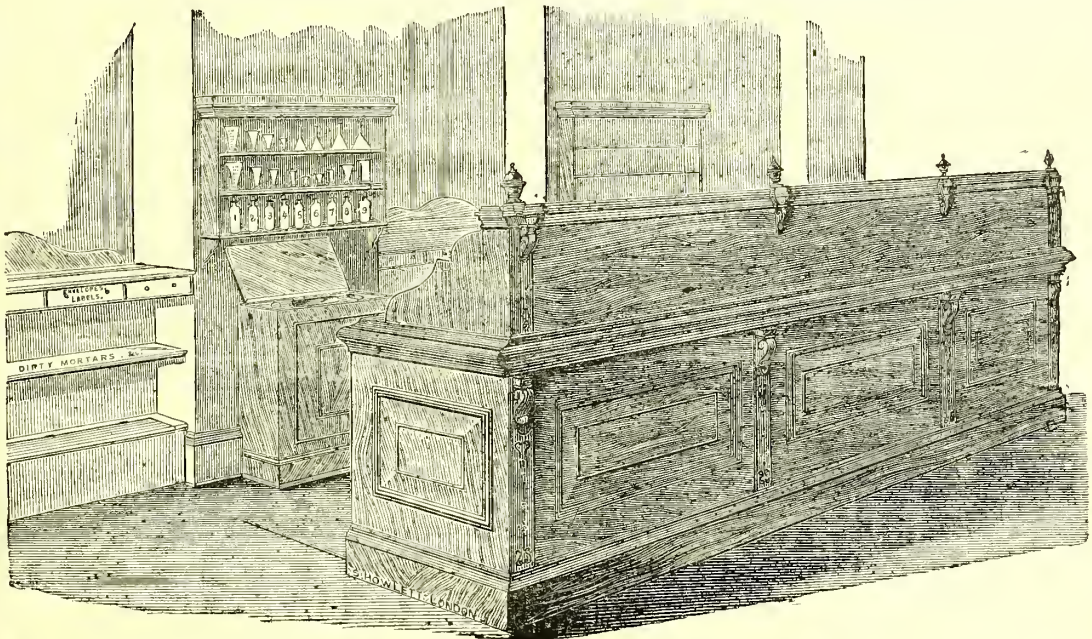
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TO STUDENTS.

SAMUEL HOWLETT begs to call the attention of the Profession to these descriptive sketches of the Examination Counter and Fittings recently erected by him at the Society's Rooms, Bloomsbury Square, London, in which are embodied all the Modern Dispensing Arrangements, affording every possible facility to Candidates in passing their Examinations.

Sketch No. 1 is the front view of counter, and shows also the fittings on wall behind, consisting of Washstand, Shelves for Bottles,

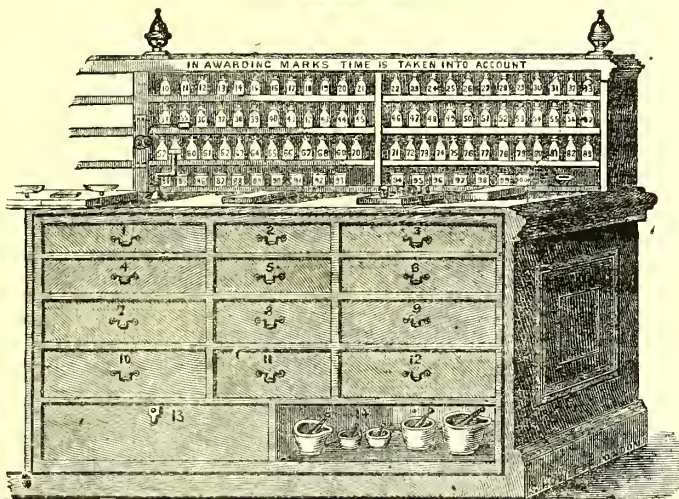


Measures, &c., and Desk for writing, under which are placed Drawers for Envelopes, Labels, &c.

Sketch No. 2 shows one-third of Counter at back. This portion is five feet long, and is the space allowed for two Candidates.

The Drawers are labelled and supplied with utensils as under:—

1. Paper.
2. Knives, Stirrers.
3. Paper.
4. Corks, Tow, and Boxes.
5. Silver Leaf, 5-gr. Pill Machine.
6. Corks, Tow, and Boxes.



7. Medicine Bottles and Vials.
8. 1-gr. and 2-gr. Pill Machine.
9. Medicine Bottles and Vials.
10. Covered Pots and Poison Bottles.
11. Plasters and Skins.
12. Covered Pots and Poison Bottles.
13. Mortars, &c.
14. Mortars, &c.

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COMMON PRINCIPLE TRUSSES, Basil and Chamois	£0 16 0	SALMON & ODY'S EXPIRED PATENT, <i>Single</i> , White or Red Roan ..	£1 7 0
Ditto Mole Lined	18/ and	1 0 0		Ditto Calf and Silk sewn	1 10 0
Ditto White or Red Roan	1 4 0		Ditto <i>Double</i> , Basil and Chamois £2 2s. and ..	2 8 0
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DOUBLE TRUSSES, COMMON PRINCIPLE, covered Basil and Chamois	1 4 0		Ditto " Calf, Silk sewn	3 0 0
Ditto Mole Lined	1 6 0		VERY NARROW, SALMON & ODY'S PRINCIPLE, as "Wickham's," a	
Ditto White or Red Roan	1 10 0		Superior Truss, <i>Single</i>	2 14 0
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SINGLE CIRCULAR, VERY LIGHT AND NARROW SPRING, imper-				COLE'S EXPIRED PATENT TRUSSES, <i>Single</i> , covered best Doeskin	48/ and 3 0 0
ceptible—				Ditto <i>Double</i> , covered best Doeskin 96/ and ..	6 0 0
Plain, <i>Single</i> .. ..	..	1 12 0		MOC-MAIN TRUSSES, Plain, Stuffed real Moc-Main—	
Best Covered, <i>Single</i> .. ..	..	2 5 0		as White's, £3 12s. Double ..	7 4 0
Plain, <i>Double</i> .. ..	..	2 2 0		Ditto Sunk Springs, ditto—	
Best Covered, <i>Double</i>	2 16 0		as White's, £5 8s. Double ..	10 16 0
SALMON & ODY'S EXPIRED PATENT, <i>Single</i> , Basil and Chamois	1 4 0			

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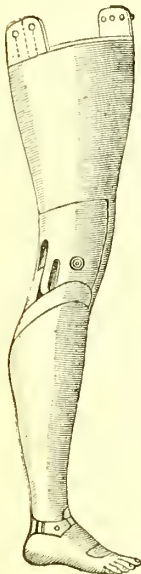


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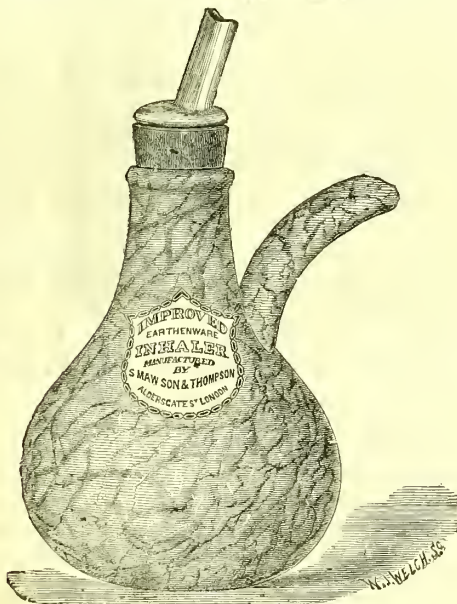
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FIG. 1



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.

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"To J. M. Fairlie, Esq., Glasgow."

"Birmingham, January 7th, 1879.

"Yours faithfully,"

"WILLIAM AUSTIN.

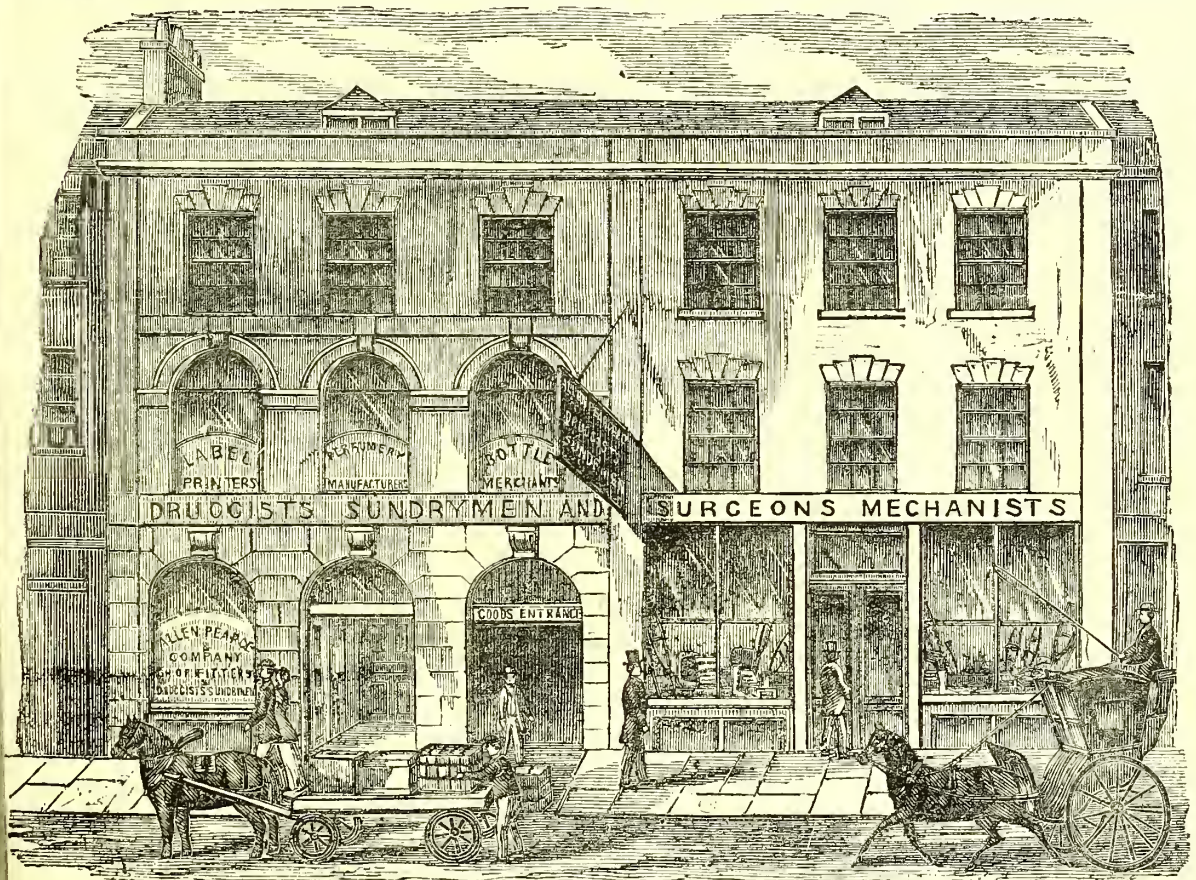
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NESTLE'S MILK FOOD,

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Nestle's is the original and genuine Milk Food or Powder. The extensive demand for this Food, its well known superiority and universal recognition by the medical profession, have produced the inevitable imitations. The trade and the public are hereby cautioned. Nestle's Milk Food has stood the test of years. Take no other under any pretence whatever.

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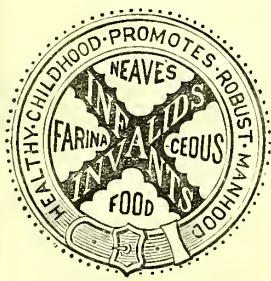
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NEAVE'S FOOD

FOR INFANTS & INVALIDS



TRADE MARK.

Is pre-eminently rich in albumenoids and phosphates, and the starch which it contains is in a state readily assimilated by the infantile digestion.



NEAVE'S FOOD has received the high and unqualified approval of eminent medical men for many years past. It commands a ready sale, for it is strongly recommended by mothers to the notice of their lady friends; and infants often give it a preference, refusing other foods. As a natural result, the sale has extended rapidly, especially during the past four years, necessitating the erection of extensive premises, again enlarged in December, 1876, where the preparation is carried on under the personal supervision of Mr. NEAVE.

NEAVE'S FOOD is sent in large quantities to the Colonies and to the United States. It is prepared with special reference to exportation, for which the 5s. tin is particularly adapted.

NEAVE'S FOOD is sold in 1s. and 5s. Tins, and 4d. Tinfoil Packets, by Chemists, Grocers, and Storekeepers at home and abroad.

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From *The United States' Medical Investigator*, for September 15, 1876.

"In Dr. Ruddock's works we find this food extolled above all others met in the English market, and we were glad when we learned that our friend, J. O. Noxon, of Brooklyn, was the agent for the United States. We decided to give it a trial, and report at our earliest convenience.

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From J. NOTTINGHAM, M.D., Resident Physician, Brooklyn Maternity, 48 Concord Street, Brooklyn, N.Y., April 28, 1876.

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See THE CHEMIST AND DRUGGIST of July 14, 1877, page 290; also "Diary for 1879," pp. 12 and 13; also THE BRITISH AND FOREIGN CONFECTIONER, December 1, 1877, page 170.

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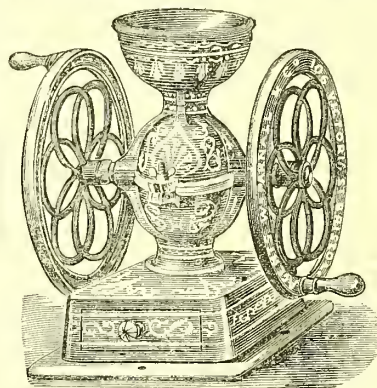
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Plain Black Currant, old square ..	2 6	2 8
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Black Currant and Ipecacuanha ..	2 6	2 8
Black Currant and Tannin..	3 0	3 3
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(Ipecac. and Morph., strength as "B. P.")		

In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size, From EDWARDS, London; through any Wholesale House; and from the Manufacturers,

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Who will forward Samples by post on application.

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CITRATE OF MAGNESIA

AND OTHER GRANULAR EFFERVESCENT PREPARATIONS.

Bishop's Granular Effervescent Citrate of Magnesia (introduced in 1857) is the original preparation of that name, and although a host of imitations have been placed on the market, this is universally recognised as far the finest in appearance, flavour, and quality of ingredients. This reputation has been secured by an un-deviating preference for the finest quality in the ingredients, and by a scrupulous care in the manipulation and preparation of the article. The result is that a large number of the highest-class firms in Great Britain refuse to keep in stock any other granular preparations than those manufactured by Mr. Bishop, while a continually increasing demand from America, Australia, and other foreign countries, indicates that the superiority of this manufacture is as highly appreciated abroad as at home.

As heretofore, Mr. Bishop continues to superintend personally the manufacture of all his preparations, and he is determined that firms who honour him with their orders shall always have reason for their confidence. Chemists and Druggists who pride themselves on supplying to their customers none but the finest goods will supply no other Granular Effervescent Preparations than "Bishop's."

Fac-simile of the Label of Bishop's Granular Effervescent Citrate of Magnesia, Registered at Stationers' Hall, November, 1860, and used over a million times:—



The Effervescent Properties of this light and elegant Preparation are retained in the highest degree, through its granular form, producing a continued sparkling effervescence and preserving the flavour as a palatable Saline Draught.

It is very valuable to Travellers, especially in tropical climates, as its properties are retained for any length of time unimpaired.

DIRECTIONS.—Two tea-spoonfuls or more, put into a tumbler half full of water, and drunk during effervescence, will prove a mild but efficient Aperient; while a small tea-spoonful, taken in a wine-glassful of water, will act as a valuable anti-acid cooling draught when feverish. A deliciously cooling and refreshing beverage may also be made by adding to a tumblerful of cold spring water (previously sweetened with sugar,) a small quantity of the Citrate.

INTRODUCED AND PREPARED BY
ALFRED BISHOP, Manufacturing Chemist,
17, SPECK'S FIELDS, MILE END NEW TOWN,
LONDON.

This Bottle should be kept well corked, and in a dry place.

On application to the Court of Chancery in 1865, an Injunction was immediately granted, restraining the imitation of the above label, and the Defendant was ordered to pay all the costs of the action. Dealers are cautioned against the sale of any article bearing a colourable imitation of the above label.

The following important Testimonials represent the opinion of the Trade:—

At the evening meeting of the Pharmaceutical Society, November 5th, 1873, the President (Mr. T. H. Hills) remarked that "he considered Mr. Bishop's a most elegant preparation," while Mr. Sandford (ex-President) stated that "he sold Mr. Bishop's preparation, BELIEVING IT TO BE THE BEST."

Dr. Redwood, Professor of Chemistry at the Pharmaceutical Society of Great Britain, thus writes:—

"I have examined a great many samples of Mr. Bishop's granulated preparations, obtained at various times and from different sources, and have found them to be very uniform in character, fully charged with Carbonic Acid, and obviously made with great care and accuracy."

Messrs. Ward & Co., Richmond, Yorkshire, write:—

"Your Magnesia is much appreciated in our connection. We have sold other makers' in former years, but now we shall never sell any but Bishop's. Our customers have sometimes complained of the Citrate of Magnesia, and we have told them they will never be disappointed if they always ask for Bishop's, and see that they get it."

Mr. S. H. Wilsner, Tenterden, writes:—

"I am frequently offered the so-called Magnesia Citrate at a less cost than yours, but it is much inferior both in sightliness and effect. I much prefer your make."

Messrs. John Wyeth & Brothers, Philadelphia, U.S., in their Trade Circular, write:—

"Mr. Bishop's preparations are conspicuously distinguished among the many imitations for the beauty of the granules, their ready and perfect solubility, and the purity and freshness of the flavour."

MINERAL WATER SALTS.

For the preparation of Artificial Waters, these "Granular Effervescent" Salts are especially suitable. They give a refreshing draught, and may be relied on as presenting at the same time the chemical ingredients of the Natural Waters. It is obvious that in this form the "Granular Effervescent" Preparations present many advantages over the Waters themselves. While all the constituents of the Natural Springs are excellently represented, the Salts are extremely portable, more economical, and with them a sparkling, refreshing draught is procurable in any quantity, at any time.

LITHIA,
VICHY,
PULLNA,
SELTZER,

CHELTENHAM,
CARLSBAD,
KISSINGEN,
FRIEDRICHSHALL,

are supplied in the Granular Effervescent form. Chemists who are not already introduced these Mineral Water Salts will find them very popular and profitable articles of sale. The consumption of them is rapidly increasing.

The most scrupulous attention is given to the execution of Foreign Orders.

Supplied by Messrs. Felton, Grimme & Co., Melbourne; Elliott Bros., Sydney; Kempthorne, Prosser & Co., Dunedin; and all Merchants and Chemists. FOREIGN ORDERS sent to English Merchants should particularly specify "BISHOP'S" PRODUCTS. Comparison of these with any of the imitations will at once prove the superiority of the former in colour, flavour, solubility, and effervescence.

CHEMICAL MANUFACTORY, SPECK'S FIELDS, MILE END NEW TOWN, LONDON, E.
Agents for the United States: Messrs. JOHN WYETH & BROTHERS, Philadelphia, U.S.

OTHER GRANULAR PREPARATIONS.

The following are highly esteemed by many eminent medical men, both in England and America, affording as they do an elegant and perfectly reliable means of administering the remedies they contain:—

Granular Effervescent Ammonio-Citrate Bismuth.

A special advantage of this preparation is, that Bismuth is presented in a perfectly soluble form.

Granular Effervescent Bromide Potassium.

The most agreeable form of administration of this drug.

Granular Effervescent Carbonate Iron.

Excess of carbonic acid aids considerably the assimilation of the proto-carbonate.

Granular Effervescent Citrate Iron.

Forms an elegant, sparkling, chalybeate water, when administered in the granular effervescent form.

Granular Effervescent Citrate Lithia, 4 grs. in each 5j.

A teaspoonful of this salt yields a draught fully equal to a bottle of Lithia Water. Its portability and economy are obvious.

Granular Effervescent Citrate Potash.

An admirable form for administering this valuable anti-febrile Salt. The granular effervescent preparation contains 8 grains in each drachm.

Granular Effervescent Citrate Quinine.

In the granular effervescent form the bitterness of this and similar medicine is considerably masked.

Granular Effervescent Magnesia Aperient.

An elegant means for the administration of magnesia.

Granular Effervescent Citrate Quinine and Iron.

Granular Effervescent Phosphate Iron.

Granular Effervescent Seidlitz Mixture.

A DESIDERATUM SUPPLIED!

Important Notice to
the Trade both at
Home and Abroad.

By the introduction of WENHAM'S LIME JUICE SALINE to the notice of their Customers (which from its unique and attractive appearance it itself effects when displayed upon the counter), Chemists have the opportunity of considerably augmenting their returns by the sale of this entirely novel and elegant preparation, which—to enumerate some of its advantages—

Possesses in a complete and portable form the valuable anti-scorbutic, alterative, and general healthful properties of Lime Juice and Potash;

Rendering it in the highest degree a remedy at once palatable, refreshing, and health-sustaining;

Which with a total absence of qualities whereby its range of usefulness can be limited, as in the case of purgative and obviously weakening Tartrates of Soda, &c.,

Supply important desiderata that, considered in connection with the unapproached intrinsic value of the article,

Amplify warrants the assumption of its obtaining the decided approval of the Public wherever introduced.

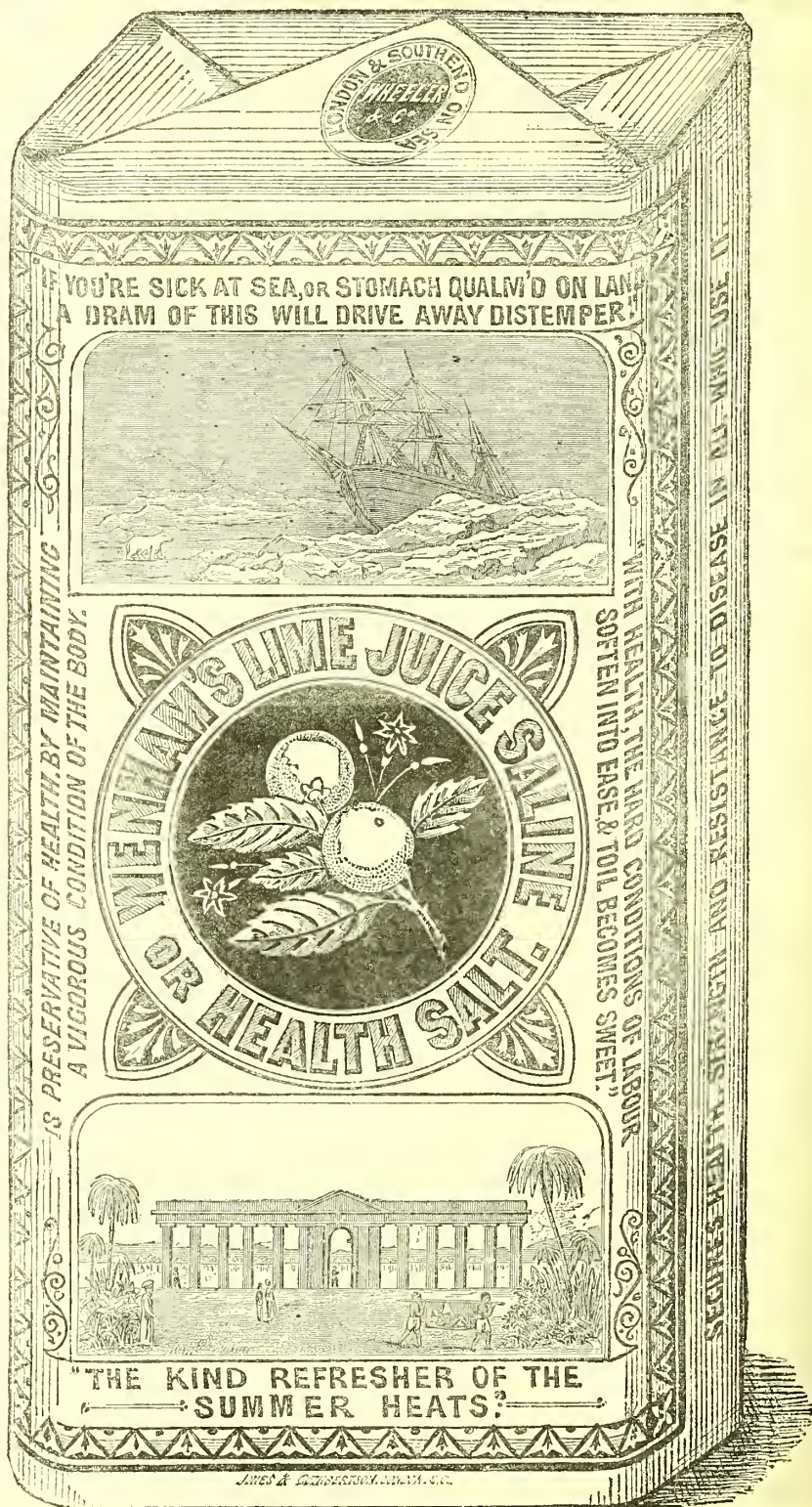
In Bottles, 2/6 and 4/6 each;
Cases for Export, 21/-

Sole Manufacturers (Registered),

WHEELER & CO.,
LONDON
AND
SOUTHEND - ON - SEA.

Kept by and may be ordered of the
following London Firms—

Messrs. Barclays; Edwards;
Maw, Son & Thompson;
Mather; Newberys; and
Sutton.



CHEMISTS' SPECIALITIES.**NON-ALCOHOLIC, AERATED, AND PHOSPHATED IRON BEVERAGE.****ZOEDONE.****BRAIN AND NERVE TONIC AND NUTRIENT TONIC BEVERAGE.**

ZOEDONE is not a medicine, but a beverage for daily use. It possesses properties combined in no other beverage, having the essential constituents of the BLOOD, BRAIN, and NERVE TISSUE. It is agreeable to the palate, pleasant to the eye, and innocent in its action. It is also non-alcoholic. As a dinner beverage it is unsurpassed as an agreeable sparkling drink; especially adapted for the overworked, worried, or anxious; for convalescents it is invaluable. It is recommended to the weak and to the strong as life-renewing and health-sustaining. The Faculty speak in the highest terms of it; and an award of Honourable Mention has been given to it at the Paris Exhibition, 1878.

PRICES (including Bottles), free on Rails at Wrexham:—6s. per dozen, in Half Champagne Bottles.

6d. EXTRA PER DOZ. FOR PACKAGES, not returnable. 1s. PER DOZ. EXTRA, specially prepared for shipment, and packed in casks.

"Among the products exhibited by R. Evans and Company, of Wrexham, is their Zoedone or Phosphated Beverage, which is an elegant palatable tonic drink containing the phosphates—lime, iron, soda, and potash."—LANCET.

ZOEDONE MAY SAFELY BE TAKEN DAILY—IN USUAL QUANTITIES AS OTHER BEVERAGES.

Dr. ED. A. KIRKBY, in his work on "The Value of Phosphorus," says:—"The therapeutic effects of Phosphorus are due to its ALIMENTARY properties, and when employed as a MEDICINE it is appropriated as a FOOD in building up and renovating nerve tissue. Phosphorus is a well-known constituent of the blood, and a never-failing ingredient in the more important tissues and fluids of the body. In common with Iron and Lime, it is a very important ALIMENTARY principle, and whenever its supply is not in proportion to the needs of the economy, deterioration of nervous tissue and nerve force is an inevitable consequence."

Opinions of the Press, and Dr. Hassall's Report.

"**ZOEDONE** is at once a food and a drink, having high value for sustentation and for restoration of the debilitated,"—*British and Foreign Confectioner*.

"**ZOEDONE** is no doubt a very efficient and pleasant vehicle for the administration of the but little soluble phosphate of iron."—*Lancet*.

Dr. WOOD says:—"As a nutrient tonic to the nervous system, and in all cases of nervous exhaustion, the use of Phosphorus is commended by reason and by experience."

"I have carefully examined a sample of the New Aerated Mineral Water, manufactured by Messrs. Evans & Co., and to which they have given the name of **ZOEDONE**. I find the statement made respecting its composition to be fully borne out by the analysis. The **ZOEDONE** is a BRIGHT, SPARKLING, and VERY PLEASANT beverage, quite free from any medicinal taste; indeed, it forms a most agreeable and elegant vehicle for the administration of the Phosphates of Lime and Iron which it contains, and which are in a state of complete solution."—ARTHUR HILL HASSALL, M.D., Author of "Food, its Adulterations and the Method of their Detection."

Patentee: D. JOHNSON, F.C.S. Manufacturers: RICHARD EVANS & CO., Wrexham, North Wales.

ALSO MANUFACTURERS OF ABSOLUTELY PURE AERATED MINERAL WATERS FOR HIGH-CLASS TRADE.
SPECIAL TERMS FOR CHEMISTS.

RICHARD EVANS & CO.'S
NON-EFFERVESCENT CONCENTRATED SOLUTION OF
LITHIA & POTASS.

FOR THE USE OF THE MEDICAL FACULTY AND FOR DISPENSING CHEMISTS.

Each fluid ounce contains 10 grains Lithia Carbonate and 20 grains Potass Bi-carb.

A 20-ounce bottle of this Liquid Concentrated Lithia and Potass is equal in Medicinal value to three-and-a-half dozens of ordinary Aerated Lithia Water.

From the *Lancet*.—"NOTE ON THE PARIS EXHIBITION.—Among the pharmaceutical products shown by Messrs. R. Evans & Co., of Wrexham, is to be noticed their Concentrated Solution of Lithia and Potass, which is a good therapeutical improvement."

In 20-ounce Bottles, at 6s. each.

RICHARD EVANS & CO.'S
AROMATIC GINGER ALE

Is non-alcoholic, and free from intoxicating properties. It is eminently stimulating and invigorating, pleasant to the eye, and agreeable to the taste. As a dinner beverage it promotes digestion. It is the safest beverage for the OVERHEATED, and is thus specially adapted for evening parties. It is recommended to be deanted (say two or three bottles at a time) into a glass jug, and its sparkling properties will then be improved when poured from the jug into the tumbler or champagne glass.

R. EVANS & Co.'s GINGER ALE may be safely taken by the young or the aged as a daily beverage, and is equally adapted for a winter or summer drink.

R. EVANS & Co.'s GINGER ALE, and all their other beverages, are perfectly free from impurities, and are guaranteed free from LEAD and other injurious contaminations. The water from which these beverages are prepared is unsurpassed for purity, as shown by the analysis of several distinguished chemists.

Price 30s. per gross,

In which quantities (or assorted Mineral Waters) it is delivered carriage paid to any station, the empties being also returned at R. EVANS & Co.'s charge.

RICHARD EVANS & CO., Wrexham, North Wales.

MILLS & CO. BOURNE WATER

THE PUREST IN ENGLAND.

MILLS & CO., Manufacturers of the Original BOURNE
ARTESIAN AERATED WATERS.

BOURNE SODA WATER, unequalled for its natural Alkalinity.

BOURNE POTASH WATER—a Special Remedy for Rheumatism
and Gout.

BOURNE LEMONADE—Superior Quality, made from the Fruit.

BOURNE LITHIA WATER—Specific for the Gout. Guaranteed
to contain a fixed quantity of Lithia.

BOURNE SELTZER WATER—The natural Alkalinity of the
Bourne Artesian Well Water combined with Artificial Salts, produces one of the best articles made. This Seltzer Water
is well adapted for invalids for its purity.

When taken at dinner-time, it promotes digestion.

Early in the morning, slightly aperient.

R. M. MILLS & CO., MANUFACTURERS, BOURNE.

J. BELL & CO., 338 Oxford Street; Messrs. PADGETT & SON, Wine Merchants, Wholesale Agents, 27 Motcombe
Street, London; Messrs. HARDY & CO., Chemists, 42 Fenchurch Street, London;

And their appointed Agents throughout the Kingdom.

J. H. CUFF'S MINERAL WATERS,

Atkinson St., Deansgate,

MANCHESTER.

SODA WATER
SELTZER WATER
POTASS WATER
15 grs.

LEMONADE
GINGER ALE
LITHIA WATER
5 grs.

LITHIA WATER WITH POTASS.

QUININE TONIC WATER, &c., &c.

SENT IN BIN CASES. NO PACKING REQUIRED.

Carriage paid on 12 Doz. assorted, or 6 Doz. of one kind.

Priced Lists free on application.

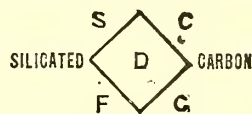
DISCOUNT ACCORDING TO QUANTITY.

SPECIAL TERMS FOR EXPORT ORDERS.

Attention is directed to Cuff's Soda, Seltzer, and Potass
Waters, and Ginger Ale (the latter a speciality), all of which
command a very extensive and ready sale.

Cuff's Waters are prepared expressly for a High-class
Family Trade.

SILICATED CARBON FILTERS.



Prize Medals—PARIS, 1867. HAVRE, 1869.

ADOPTED, IN PREFERENCE TO ALL OTHERS, by
the Admiralty, and used in the General Post Office, the London and
Provincial Hospitals, and many Public Establishments in various parts of
the World.

SILICATED CARBON FILTER COMPANY,
CHURCH ROAD, BATTERSEA, LONDON.



LITHIA, 5 grains (Liq. Lithia Effervescens, P.B.).
LITHIA, with Potash or Ammonia.
POTASH WATER, 15 grains.
CITRATE OF POTASH WATER.
CITRATE OF POTASH AND IRON WATER.
BROMO-CITRATE OF LITHIA WATER.
QUININE TONIC WATER.
SODA WATER, 15 grains in each Bottle, P.B.
MINERAL ACID WATER, flavoured with Orange, Lemon,
or Ginger; superior to Lemonade or Ginger Beer.

Orders for 6 dozen carriage free.

HOGG, 42 Connaught St., Hyde Park Square, London.

INDEX TO ADVERTISEMENTS,

See pp. 35 and 36.

HAY'S CONCENTRATED SOLUBLE ESSENCE OF JAMAICA GINGER

(Guaranteed Pure and Free from Capsicum).

Specially adapted for the manufacture of GINGER BEER, GINGER ALE, WINES, and CORDIALS. These, when made with this essence, are bright and transparent, and have the finest Jamaica Ginger flavour and aroma. It is also adapted for all Dietetic, Medicinal, and Pharmaceutical purposes.

DOSE.—Ten to Forty Minims.

"Singularly free from resin."—*The Lancet*.

"It is really necessary that a superior Ginger Beer should be introduced to the public, and in Mr. HAY'S GINGER ESSENCE we find the very ingredient to bring about such a desideratum."—*Mineral Water Trade Recorder and Advocate*.

"Ginger Beer manufactured from this ESSENCE has the purest Jamaica Ginger Aroma distinguishable as soon as poured out. It is a beverage fit for any gentleman's table, and ought to attain great popularity."—*The Chemist and Druggist*.

"Contains the essential oil or AROMATIC CONSTITUENT OF THE ROOT, has the AROMA OF GINGER without the unpleasant taste of the resin, and is specially adapted for flavouring GINGER BEER."—*Pharmaceutical Journal*.

"It is a pure elegant preparation, and is free from resinous matter. Ginger Beer made with it is clear and transparent, has the aroma and flavour of the ginger, and is very pleasing to the palate."—*Medical Times and Gazette*.

"The Ginger Beer made with this purer TINCTURE OF GINGER is extremely grateful and palatable. It is clear and bright as water, and is certainly preferable to some wines we have tasted under the name of champagne."—*Medical Press*.

A COMPOUND ESSENCE, which is an addition of Vanilla, Lemon, and other flavours, is also prepared. It is strongly recommended for the manufacture of Ginger Beer, Wines, &c.—to which it imparts a peculiarly fine fruity flavour and aroma. Syrups and all Saccharine preparations of Ginger generally undergo speedy fermentation, but when made with either of these Essences, keep remarkably well.

TRADE PRICES:—Simple Essence, 5/- per lb.; Compound Essence, 5/6 per lb.

PREPARED BY

W. HAY, Chemist, &c.,

4 REGENT'S TERRACE, ANLABY ROAD, HULL.

AGENTS—Messrs. HEARON, SQUIRE & FRANCIS, Wholesale Druggists, 5 Coleman Street, London, E.C.

PURE AERATED WATERS.

MANUFACTURED BY

T. & F. J. TAYLOR, NEWPORT PAGNELL.

ESTABLISHED 1835.

Purity and Excellence of the Water certified by Analysis by
PROFESSOR ATTFIELD, Ph.D., F.C.S.

NEWPORT PAGNELL SODA WATER, containing
10 grains of Bicarbonate of Soda in each bottle.

AERATED WATER, without Alkali.

POTASH WATER, containing 10 grains or 20 grains of
Bicarbonate of Potash in each bottle.

LITHIA AND POTASH WATER.

SELTZER WATER, prepared according to Analysis of the
Natural Water.

EFFERVESCING LEMONADE, superior in flavour
colourless, and warranted to retain its brilliancy.

Each Bottle is protected by a Label bearing the Signature of the Firm.

"ABSOLUTELY PURE."

SEE ANALYSES. Sent post free on application.

ELLIS'S

CRYSTAL SPRINGS.



REGISTERED.

RUTHIN

WATERS.

Soda, Potass,
Seltzer, Lemon-
ade, also Water
without Alkali.
For GOUT,
Lithia Water, &
Potass Water.

CORKS BRANDED "R. ELLIS & SON, RUTHIN," and every
label bears their Trade Mark. Sold everywhere, and wholesale of

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

RANDALL, SLOPER & CO., SODA WATER MANUFACTURERS, SOUTHAMPTON.

GOODS FORWARDED CARRIAGE PAID WITHIN 80 MILES OF
SOUTHAMPTON, ON ORDERS OF 2 GROSS AND UPWARDS.

Soda, Seltzer, Potash & Aerated Waters
supplied in Syphon Bottles.

Importers of Hunyadi János, Friedrichshall, Vichy,
Pullna, Carlsbad, and other Foreign Mineral Waters,
supplied at Prices which will bear comparison with
London Rates.

PRICE LISTS FORWARDED ON APPLICATION.

FOREIGN MINERAL WATERS.

FREDERICKSHALL (5 Cases, 6d. per Case less) 24/- Case, 30 qts. ... 34/- Case, 60 pts.
APOLLINARIS (20 Hprs., 1/- per Hpr. less) ... 25/- Hpr., 50 " ... 39/- Hpr., 100 "

Hampers free, carriage paid; Empty Bottles, 6d. per dozen.

HUNYADI JANOS (10 Cases, 5/- less; 10 Cases, 3/- each less)

SELTZER ... 30/- Case, 25 qts. ... 50/- Case, 50 pts.

PULLNA ... 11/6 Hpr., 25 " ... 15/6 Hpr., 50 "

VICHY ... 18/- Case, 20 " ... 30/- Case, 50 "

CARLSBAD ... 31/- " 50 " ... 27/- " 50 "

KISSENGEN ... 37/6 " 50 "

SCHWALLBACH ... 45/- " 50 "

HOMBURG ... 27/6 " 50 "

WILDUNGEN ... 37/6 " 50 "

CARLSBAD SALTS, 1-lb. Bots., 21/- per doz.; 1-lb., 41/- per doz.; 1-lb., 80/- per doz.

FINE NORWEGIAN BLOCK ICE.

ORIGINAL BLOCKS, 2 to 3 cwt. each ... 2/6 per cwt.

1 cwt. to 2 cwt. ... 3d. per lb. | Under 1 cwt. ... 1d. per lb.

Packing and Mats for Original Blocks free; 3d. each allowed for Mats if returned
in good condition.

PRINTED DIRECTIONS for STORING ICE sent free on application.

W. B. HARRISON,

Importer of Ice & Mineral Waters,
6 BRIDGE STREET, SUNDERLAND.

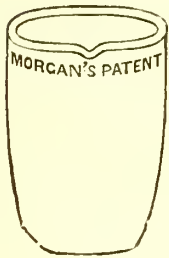
THE PATENT PLUMBAGO CRUCIBLE COMPANY

(Sole Manufacturers of MORGAN'S PATENT CRUCIBLES),

BATTERSEA WORKS, LONDON, S.W.

MORGAN'S PATENT CRUCIBLES.

Each number contains about 2 lbs. English (thus, No. 25=50 lbs. capacity), and are thus stamped:-



A

No. 1..	per doz.	£0 3 0
2..	"	0 6 0
3..	"	0 9 0
4..	"	0 12 0
5..	"	0 15 0
6..	"	0 18 0
8..	"	1 4 0
10..	"	1 10 0
12..	"	1 16 0
14..	"	2 2 0
16..	"	2 8 0

No. 18..	per doz.	£2 14 0
20..	"	3 0 0
25..	"	3 15 0
30..	each	0 7 6
35..	"	0 8 9
40..	"	0 10 0
45..	"	0 11 3
50..	"	0 12 6
60..	"	0 15 0
70..	"	0 17 6

No. 80..	each	£1 0 0
90..	"	1 2 6
100..	"	1 5 0
120..	"	1 10 0
150..	"	1 17 6
200..	"	2 10 0
250..	"	3 2 6
300..	"	3 15 0
400..	"	5 0 0
500..	"	6 5 0

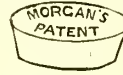
MORGAN'S PATENT MUFFLES, to suit above Crucibles, 2d. per Number.



COVERS, 1d. per No.



STIRRERS 12s. per dozen.



STANDS, 1d. per No.



TRADE MARK.

CLAY CRUCIBLES, ETC.

EXTERIOR DIMENSIONS.

Attention is drawn to the description on the Crucibles below, and in ordering these particulars should be given to prevent errors and disappointments.

BATTERSEA ROUND.

Stamped as on Illustration.

NEW STYLE NESTED.

BATTERSEA TRIANGLE.

Stamped as on Illustration.



No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.	No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
A	2 3/4	1 1/2	£0 0 5	0/6	B	3 1/4	1 3/4	£0 0 6	0/6
C	3 1/4	2 1/4	0 0 9	0/6	D	4 1/4	2 3/4	0 0 10	0/6
E	4 1/4	3 1/4	0 1 4	0/9	F	5 1/4	3 3/4	0 1 5	1/0
G	5 1/4	4 1/4	0 2 0	1/0	H	6 1/4	4 3/4	0 2 1	1/3
J	6 1/4	5 1/4	0 3 0	1/6	K	7 1/4	5 3/4	0 3 2	2/0
L	8 1/4	7 1/4	0 5 6	2/0	M	8 1/4	6 3/4	0 6 6	2/6
N	9 1/4	8 1/4	0 9 0	3/0	O	10 1/4	7 3/4	0 13 6	3/6
P	11 1/4	9 1/4	0 15 0	3/6	Q	12 1/4	8 3/4	0 17 0	4/0
R	13 1/4	10 1/4	1 3 0	5/0					

The above 9 sizes form one nest. Price 60/0 per dozen nests. Any size can be had separately.

The above 8 sizes form one nest. Price 45/0 per dozen nests. Any size can be had separately.

No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
S	4 1/2	3 1/2	£0 2 0	1/0
U	3 1/2	2 1/2	0 1 1	0/9
W	2 1/2	1 1/2	0 0 8	0/6
Y	2 1/2	1 1/2	0 0 5	0/6

The above 4 sizes form one nest. Price 4/2 per dozen nests. Any size can be had separately.

No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
T	4 1/2	3 1/2	£0 1 6	1/0
V	3 1/2	2 1/2	0 0 10	0/9
X	2 1/2	1 1/2	0 0 6	0/6
Z	1 1/2	1 1/2	0 0 4	0/6

The above 4 sizes form one nest. Price 3/2 per dozen nests. Any size can be had separately.



The BATTERSEA ROUND and TRIANGLE forms are particularly well suited for packing, being made to nest, ensuring great economy in freight and shipping charges.

LONDON ROUND. (PER GROSS.)

AS USED BY THE LONDON AND BIRMINGHAM REFINERS.



No.	Height	Crucibles	Covers	No.	Height	Crucibles	Covers
			Flat Dome				Flat Dome
1	in.	6s.	6s. 12s.	6	in.	42s.	24s. 42s.
2	2 1/2	9s.	6s. 18s.	6 1/2	6 1/2	60s.	30s. 42s.
3	3 1/2	12s.	9s. 24s.	7	7	72s.	36s. 48s.
3 1/2	3 1/2	15s.	12s. 24s.	8	8	96s.	36s. 54s.
4	4	18s.	12s. 30s.	9	9	126s.	42s. 60s.
4 1/2	4 1/2	24s.	15s. 30s.	10	10	180s.	48s. 72s.
5	5	30s.	18s. 36s.	11	11	228s.	60s. 84s.
5 1/2	5 1/2	36s.	24s. 36s.	12	12	288s.	72s. 96s.

Crucible Stands in all sizes, for Round and Triangle, &c.

RETORTS. (PER DOZEN.)

	Plain.	Tubulated.		Plain.	Tubulated.
1/2-pint	9s.	12s.	2-quart	42s.	54s.
1	9s.	12s.	3	54s.	66s.
1 1/2	15s.	20s.	4	60s.	72s.
2	24s.	30s.	6	90s.	108s.
3	30s.	36s.	8	120s.	144s.
4	36s.	45s.	16	180s.	210s.

LONDON TRIANGLE. (PER GROSS.)

AS USED BY THE LONDON AND BIRMINGHAM REFINERS.

No.	Height	Crucibles	Covers	No.	Height	Crucibles	Covers
			Flat				Flat
1	in.	£ s. d.	s. d.	2 1/2	in.	£ s. d.	s. d.
1 1/2	1 1/2	0 4 0	6 0	3 1/2	3 1/2	0 10 0	9 0
2 1/2	2 1/2	0 5 0	6 0	4 1/2	4 1/2	0 12 0	9 0
3 1/2	3 1/2	0 6 0	6 0	5 1/2	5 1/2	0 15 0	12 0
4 1/2	4 1/2	0 8 0	6 0	6 1/2	6 1/2	0 18 0	12 0
5 1/2	5 1/2	0 9 0	6 0	7 1/2	7 1/2	1 4 0	15 0



SKITTLE POTS. (PER DOZEN.)

Inch.	Per doz.	Inch.	Per doz.
3	£0 1 6	10	£0 7 6
4	0 2 0	11	0 9 0
5	0 2 6	12	0 12 0
6	0 3 0	14	0 18 0
7	0 3 6	16	1 4 0
8	0 4 6	18	2 2 0
9	0 6 0	20	3 0 0

The Skittle Pots are particularly well suited for all refining purposes; the contracted form prevents the ebullition of the fluxes.

SKITTLE POT STANDS AND COVERS.

TO THE MINERAL WATER TRADE.

J. B. LAMBE & Co. desire to draw the attention of LICENSEES of PATENT STOPPERED BOTTLES to their

HONESTY
IS THE
BEST POLICY.

SEAL MOTTOES

OF WHICH THEY ARE THE ORIGINAL MAKERS.

SHORT RECKONING
MAKES
LONG FRIENDS.

The Article is made of good stout Board, while the Mottoes are numerous and varied, and packed carefully in Boxes of 5,000 each.

These Seal Mottoes are a great convenience, strengthening the cap label, and keeping the lips of the bottle free from dirt.

A Large STOCK is kept, and Orders can be supplied immediately on receipt.

PRICE LIST.

5,000	:	:	9d. per 1,000.
25,000	:	:	8d. "
100,000	:	:	6d. "

Special Quotations for Larger Quantities. Samples will be sent on Application.

MANUFACTURERS OF EVERY DESCRIPTION OF LABELS, SHOW CARDS, &c., SUITABLE FOR THE TRADE

J. B. LAMBE & CO.,

CHROMO-LITHOGRAPHERS & GENERAL PRINTERS,

199 UPPER THAMES STREET, LONDON, E.C.

G. COLE,

MANUFACTURER OF BOXES FOR CODD'S PATENT BOTTLES,

AND MAKER OF

ALL KINDS OF PACKING CASES

FOR THE SODA WATER TRADE.

N.B.—Orders executed with dispatch, and on the most reasonable terms.

STEAM WORKS:—

48 and 50 TRINITY STREET, ROTHERHITHE, S.E.

EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & Sons are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (*vide* P. J. Vol. I., No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,

5 HATFIELD STREET, STAMFORD STREET, S.E.;

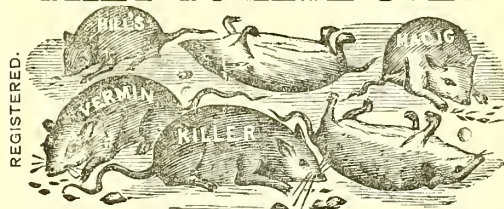
Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.

HILL'S MAGIC VERMIN KILLER

Is certain Death to Rats, Mice, Ants, Beetles, Cockroaches, and all kinds of Vermin.

THEY TUMBLE OVER



In packets, 3d., 6d., 1s., 2s., and 3s. each. Wholesale Agents: Barclay & Sons, Sangers & Sons, London; or from the Maker,

AND DIE ON THE SPOT.

EDWARD HILL, WELLINGTON, SOMERSET.

Agents wanted in all towns, and by sending business card can have bills with name and address, and their name advertised as Agents in the local papers. A LIBERAL DISCOUNT TO SHIPPERS.

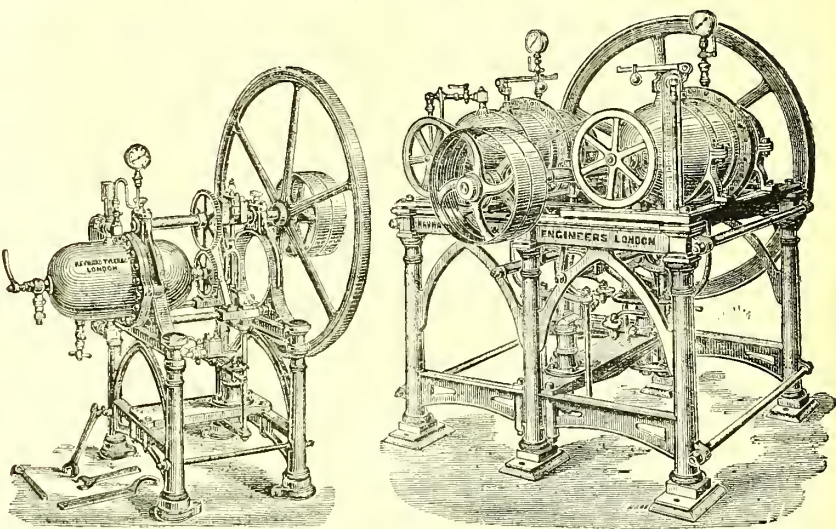
GOLD MEDAL

AWARDED AT PARIS, 1878,

FOR

SODA WATER MACHINERY

TO



HAYWARD TYLER & CO.,

WHITECROSS STREET, LONDON.

MONDOLLOT'S PATENT

Soda Water Machinery,

Continuous System without Gazometer.

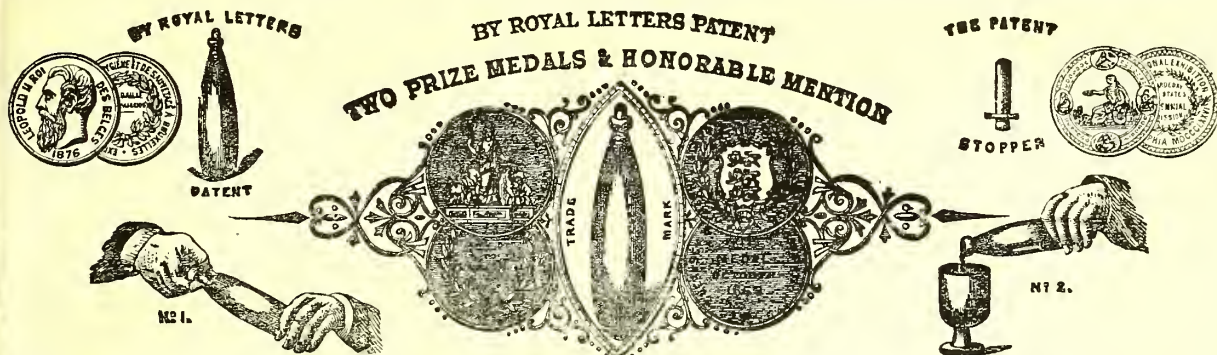
GOLD MEDAL AT THE PARIS EXHIBITION, 1878.

Full particulars on application to the Sole Agents,

MESSRS. L. FRIQUET & CO..

13 LITTLE JAMES STREET, BEDFORD ROW,
LONDON, W.C.

Sole Agents also for BRIET'S GAZOGENES and SYPHONS.



Note.—With a gentle pressure, as Shown in Diagram No. 1, the Stopper is pushed in, and the position as in No. 2 will empty the contents of the Bottle.

BARRETT & ELSERS, 9 DACRE ST., WESTMINSTER.

By Royal Letters Patent

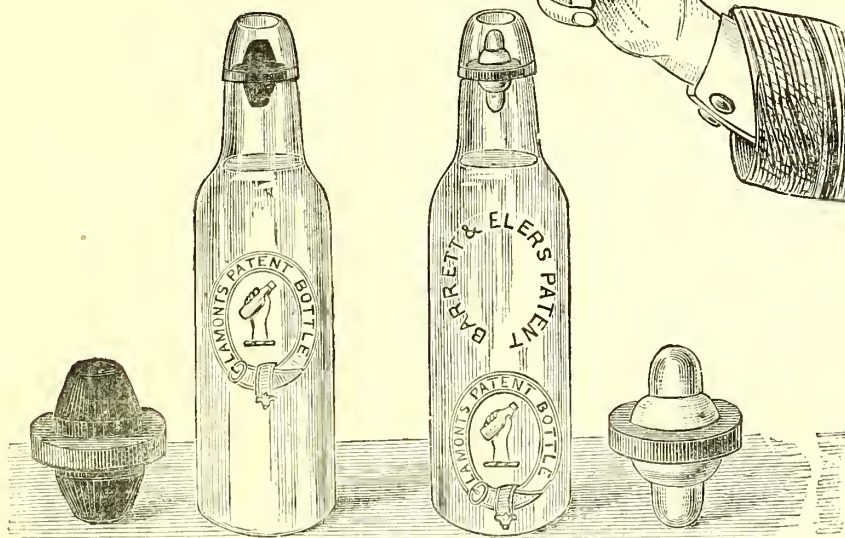


Dated June 2, 1874. No. 1923.

The Best,
The Cheapest,
The Cleanest
Stoppers
before the
Trade.
—
No Rubber
Rings that
come out or can
be taken out
of the necks.
—
killed labour
superseded.
—
Great Saving
effected.

LAMONT'S PATENT BOTTLE, &c.

Easily Filled,
Easily Opened,
Easily Cleansed
and Washed.
—
The Stoppers fit
perfectly, and
always fall in
their right
places in the
necks of
the Bottles,
thereby
preventing
leakages.



EBONITE STOPPER

GLASS STOPPER

THE NEW STOPPER

(On the left in diagram)

made of Ebonite, which is perfectly non-porous, and from its elasticity and lightness it cannot break the Bottles, and will stand any pressure required to be put into them. It is a perfectly pure material, and when properly prepared and cured, and fitted with deodorized Rubbers, it does not in any way affect the contents of the Bottles as regards taste, &c.

THE GLASS STOPPERS

(On the right in diagram)

Have now been in very extensive use and demand for the last four years, and they can be recommended for their cleanliness, simplicity, and their general neat appearance; and from their peculiar construction—being very small and light at the ends—the breakage of Bottles is reduced to a minimum.

Licensees have the advantage of using one or all these Stoppers (except in certain places which applies only to the Wooden Stopper) under one License.

BARRETT & ELSERS' FILLING MACHINES AND SYRUP PUMP COMBINED,

Have been proved to be the Best and Cheapest in the market, of which now upwards of 1,000 have been sold.

Exhibitors at the Philadelphia Exhibition] **DRINKS FOR ALL CLIMATES.** [Agricultural Hall, Location L.

UNDER THE SPECIAL RECOMMENDATION OF THE FACULTY.

SUPERCARBONATED MINERAL WATERS.

Manufactured and Sold Wholesale by **CANTRELL & COCHRANE,**

DUBLIN & BELFAST,

Makers of the Celebrated

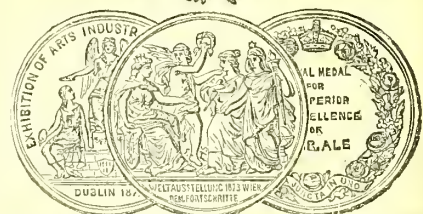
AROMATIC

GINGER ALE.

CONTRACTORS FOR THE

Abyssinian Expedition.
Cunard Steam Ship Co.
Inman Steam Ship Co.
Montreal Steam Ship Co.
Oceanic Steam Navigation Co.
National Steam Ship Co.
Pacific Steam Ship Co.
Anchor Steam Ship Co.

Also Makers by Appointment
to His Excellency
THE LORD LIEUTENANT.



Soda Water, double.
Soda Water, single.
Kali, or Potass Water.
Lemonade.

Ginger Ale, Aromatic.
Aerated Sarsaparilla.
Aerated Quinine.
Aerated Tonic Bitters.

Supercarbonated Lithia Water.
Winter Beverage.
Royal Seltzer Water.
Chalybeate Water.

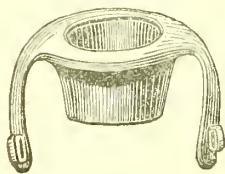
Carrara Water.
Aerated Dandelion.
Pulna Water.
Vichy Water.

Bismuth Water.
Lime Juice Syrup.
Lime Juice.
Aromatic Orange Bitters.

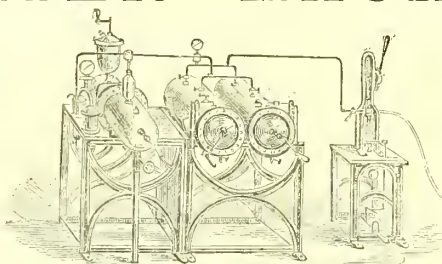
DUBLIN EXHIBITION, 1872.—The ONLY PRIZE MEDAL for "Superior Excellence" was Awarded to **CANTRELL & COCHRANE.** Also Two Prizes Vienna Exhibition, 1873; and The Gold Medal, Paris Maritime Exhibition, 1875. N.B.—Export Orders Packed in a most superior manner for all parts of the World.

SODA-WATER MACHINERY.

PATENT NOZZLE



FITS ANY BOTTLE.



THE STOPPER



GLASS OR EARTHENWARE.

GENERATOR, BOTTLING CYLINDERS, AND RACK.

DAVENPORT'S NOZZLE AND STOPPER (Horner's Patent) is the only Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices and Royalty lowered. Send for Samples.

Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

AGENTS FOR HAYWARD TYLER & CO.'S SODA-WATER MACHINERY.

Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

DAVENPORT & CO.,

Soda Water Machinists and Manufacturers and General Machine Agents,
99N HIGH HOLBORN, LONDON.

SODA-WATER BOTTLE (Codd's Patent)



To those about using a Patent Bottle, before deciding judge of the many advantages that are to be found in this Patent over others; it is, without doubt, the only one that contains all the essentials to make it perfect, and it is therefore no wonder that nearly 600 Mineral Water Manufacturers have given up all other kinds to the exclusion of this. It is the cleanest, as dirty wood or rubber does not go into the drink; there is scarcely any rubber exposed, therefore no taste, as in those stoppers that fall into the Bottle. The contents can be emptied without fear of stopper preventing outflow. The gaseous properties are retained in the drinks, as it is not thrown out of the Waters by the stopper falling into the Bottle.

PRICES ARE NOW REDUCED.

For further information apply to

BARNETT, SON & FOSTER,
SOLE AGENTS,

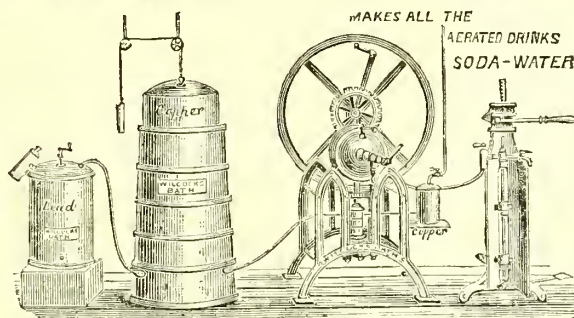
23^T FORSTON STREET, SHEPHERDESS WALK, LONDON, N.

Highest Prize Medal for Patent Bottles, Paris, 1878; also Vienna, Philadelphia, Cape.

NATHANIEL GEORGE WILCOCKS,

SODA WATER MACHINERY, DOUBLE PUMPS, BOTTLING RACKS, STEAM ENGINES and BOILERS, &c.

A
really good
Machine



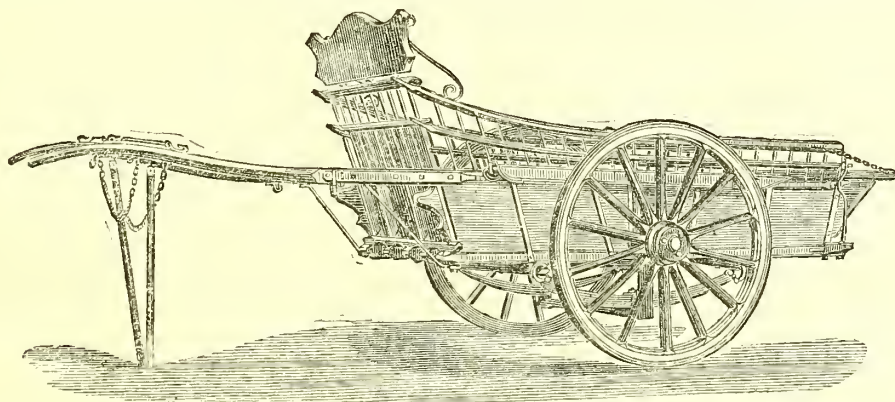
At
a moderate
Price.

ANY BOTTLING APPARATUS FOR PATENT STOPPER BOTTLES CAN BE ATTACHED TO THE ABOVE MACHINE.

A complete Steam Engine and Boiler to drive the above Machine packed and delivered at Bath,

CASH PRICE, £40.

A LARGE STOCK ON SHOW, ALL SIZES. CATALOGUES FREE.



CRANK-AXLE CARTS, VANS for ONE or TWO HORSES,
LORRY or TROLLEYS,

In Stock and in progress for the Mineral Water Trade.

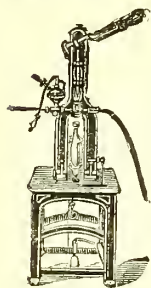
DESIGNS AND ESTIMATES FOR ANY VEHICLE FREE ON APPLICATION;
Also CATALOGUES, FULLY ILLUSTRATED.

**BATH CITY BRASS FOUNDRY AND IRON WORKS,
COOPERAGE AND WAGGON WORKS,
BATH.**



GOLD MEDAL SODA WATER MACHINERY.

Awarded Grand Medal of Progress
at Vienna, 1873.



Bottling Machine.

Seven First-class Medals awarded at various International Exhibitions over and above all other Machinery of the kind since 1862.

Soda Water made at a minimum cost by using these Machines.

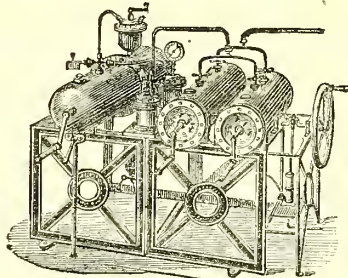
No Steam Power wanted.

Entire Saving of Coals.

Half the usual Labour.

Saves Breakage of Bottles.

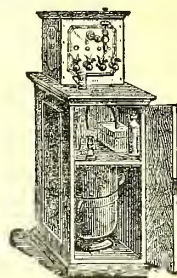
Simple in Construction.



TRADE MARK.
Generator and Bottling Cylinders.

Agents for Lamont's Patent Bottles, and Vaass & Littman's Ice Making Machines.

Sole Agents for Galloway's "Excelsior" Soda Water Machine, with Steam Engine combined, and "Universal" Double Pump Machine, Guaranteed to Make 40,000 Bottles per Day; also all other Specialties made by this celebrated House.



Cabinet Machine.

Cost of Machines Saved in one Season in Broken Bottles alone.

The undersigned are the only Manufacturers in Europe of the Improved Machines for Making, Bottling, and Drawing on Draught Aërated or Mineral Waters.

These Machines are lined with pure tin, the pipes are of pure tin, and every care is taken to make them as perfect as possible. For convenience, and saving of time and labour, these Machines are not excelled; therefore, for Makers of Soda Water, Lemonade, Ginger Ale, Seltzer, Potass, Vichy, and other Waters, they are invaluable.

Before purchasing send for Catalogue of 104 pages, post free, giving illustrations and prices.

NOTICE.—The Trade and all others are notified that no one has authority from us to manufacture any of our specialties; and anyone pretending to have such, and manufacturing the same, will be dealt with according to law. All are therefore safe only by dealing with the original Inventors and Manufacturers.

DOWS, CLARK & Co., 46 & 47 Frith Street, Soho, LONDON.

In our New Catalogue, just issued, will be found illustrations and descriptions of the various Machines for Making Aërated Waters and Bottling the same, Marble Machines for the Counter, of various designs and prices, Copper Cylinders and Coolers, Syphons and Fillers, Ice Safes, Silver-plated Counter Draught Tubes, Tumblers, and Silver-plated Holders, Measuring Taps, Ice Cream Freezers, Fruit Juices, Extracts for flavouring, and Fruit Syrups, for Export or otherwise. Patent Clasps for Bottles, Pressure Gauges, the Cabinet Machine for Clubs, Private Families, Messes, &c. Mineral Waters for Export. Bottles, Corks, Ginger Ale Extract, Gum Extract, for producing foam, Cider Extract, &c., &c.

Lime Juice Cordial and Syrup of the very finest quality.

E. S. HINDLEY, BOURTON, DORSET.

SMALL STEAM ENGINES

(Economical in Fuel and in First Cost).

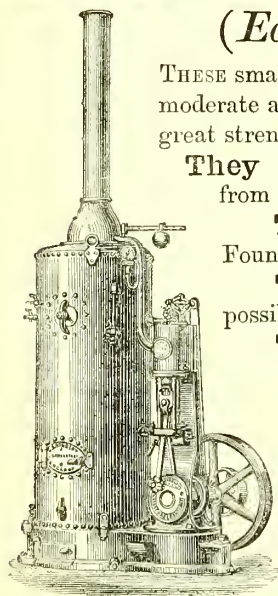
THESE small Engines are specially adapted for driving Soda Water Machinery wherever a moderate amount of cheap power is required. They combine simplicity, compactness, and great strength, are easily managed, occupy very little space, and require no fixing.

They are available at any time, as steam can be got up in half an hour from cold water.

They require no fixing, being erected on a Cast-Iron Water Tank Foundation.

They are simple in construction, and, having as few working parts as possible, are not likely to get out of repair.

They can be driven by a boy. Can be made to burn GAS instead of Coal.



Nominal horse power...	1	1½	2	3	4	5	6	8	10
Engine and Boiler combined ..£	39	47	55	70	88	100	115	135	157
Engine and Boiler on three Wheels, with Handle.....£	41	49	57	75	95	110	125	145	167

ALL SIZES IN STOCK—DELIVERED FREE TO ANY STATION.

Illustrated Catalogues with full particulars on application.

BY ROYAL



LETTERS PATENT.

CHAPMAN'S PATENT WEIGHTED BALL STOPPER, AND BRUCE'S FILLING MACHINE,

Patents dated 1872 and 1874.

Sole Proprietors: CHAPMAN & SON, 19 Priory St., Birkenhead.

The Advantages of a Good Patent Stopper over the laborious and expensive Cork System are now so thoroughly established and admitted throughout the Trade, that Patent Stoppers are almost universally used.

In order, however, to make a Stopper pay the Manufacturer handsomely for his outlay, it must of necessity have certain qualifications, or probably serious loss instead of profit will be the result. Every Manufacturer should be careful that the Stopper he uses has at least the following

MERITS:

1. The Stopper must not break or star the bottle.
2. It must not be liable to be stolen or lost.
3. It must not be liable to jam in the neck or gravitate the wrong way.
4. It must not be too dear; and in any case
5. It must be usable again whenever a bottle breaks.
6. It must be a Good Gas Holder, and easy to fill and open.
7. It should be good to wash and keep clean.
8. THE BOTTLES SHOULD BE CHEAP. CHAPMAN & SON claim all these advantages for their Stoppers.

TESTIMONIALS TO CHAPMAN & SON'S WEIGHTED BALL STOPPER AND FILLING MACHINE (Bruce's Patent.)

GENTLEMEN,—I now take an opportunity of writing to you concerning your Patent Ball Stopper. After using your Patent for the last two years, I find it to be the best I have tried yet. First, for saving of breakage; Second, for being clean and easy to wash; Third, for stoppering well. And I find that it gives every satisfaction to my customers. It is the cheapest and best Patent I have seen yet, in fact, I prefer it before any other. You may make use of my name to anyone.

Yours faithfully,

THOMAS SMITH.

To Messrs. Chapman & Son.

HALIFAX, Sept. 20, 1878.

GENTLEMEN.—The Filling Machine you sent us is giving entire satisfaction, it saves us above ten per cent. breakage, compared with the other machines we have used. And as for the Ball Stopper, we cannot speak too highly of it. We have not had a single Stopper blowing out all the time we have used them. We have had several hundred of the Longitudinal stoppers blowing out, and we have replaced them with your Ball Stopper, with which we are perfectly satisfied.

Yours respectfully,

CROSSLEY & CHAMBERS.

GENTLEMEN,—We have great pleasure in giving our testimony, with reference to the entire satisfaction which your Patent Ball Stopper has given us. It is simply perfection, for it works well, and our customers are much pleased with it. The Stopper is clean, and easy to open.

We find it has many advantages in a pecuniary point of view, saving much labour and material, and there is not so much waste in filling as by the ordinary cork system.

We cannot conclude without saying that we consider your Filling Machine the acme of perfection and simplicity. It is very easy to work, only two movements being required to fill the bottle; and if we were wanting a dozen Filling Machines to-morrow we would buy the same.

Yours truly,

To Messrs. Chapman & Son, Birkenhead.

FOOTE & HODSON.

Mineral Water Works, established 1838,

Meadow Street, BRISTOL, Sept. 18, 1878.

GENTLEMEN.—We have, since January last, had in use Four Hundred Gross of your Patent Ball Stoppers, and we now have much pleasure in stating that, not only have they given us great satisfaction, but our customers also are much pleased with them. We consider your Patent second to none.

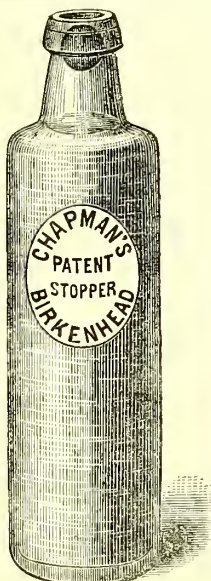
We are, Gentlemen, yours truly,

To Messrs. Chapman & Son, Birkenhead.

H. BOYCE & SON.

FOR SAVING OF BREAKAGE.

OR CLEANLINESS.

OR CERTAINTY OF ACTION
IN FILLING.THE STOPPER ALWAYS
STOPPERING, andNEVER FALLING WRONG
WAY DOWN.

FOR DURABILITY.

FOR CHEAPNESS.

And GENERAL ADVANTAGES.

CHAPMAN'S

WEIGHTED BALL STOPPER

IS CONFIDENTLY

RECOMMENDED.

Terms Moderate. Apply for all particulars to CHAPMAN & SON, 19 Priory Street, Birkenhead.

SILICATED CARBON FILTERS.

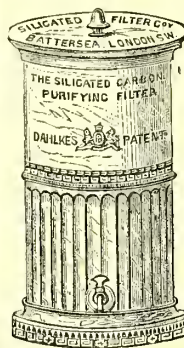
DOMESTIC FILTER, NO. 27.



Made in cream-coloured Stoneware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.

All sizes of this pattern can now be had with Patent Ice Compartment, which renders this Filter the most perfect of Refrigerators.

	PRICES.	With Ice Compartment.
No. 0, capacity $\frac{1}{2}$ gall.	.. 10s. 6d.	.. —
No. A, " 1 "	.. 14s. 6d.	.. 17s. 6d.
No. B, " 2 "	.. 21s. 0d.	.. 25s. 0d.
No. C, " 4 "	.. 32s. 0d.	.. 36s. 0d.
No. D, " 6 "	.. 42s. 0d.	.. 48s. 0d.
No. E, " 8 "	.. 52s. 0d.	.. 60s. 0d.
No. F, " 12 "	.. 70s. 0d.	.. 80s. 0d.



DINING-ROOM FILTER, No. 22.

MADE IN MARBLED CHINA.

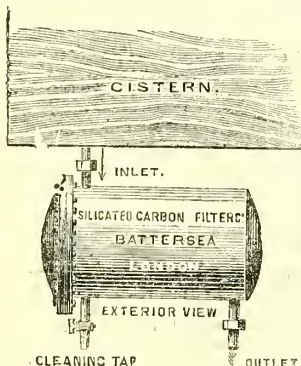
Size A holds about two gallons; size B, five gallons.

PRICES.

A	35s.
B	80s.
A, with Ice Compartment (New Patent.)	42s.
B, with Ice Compartment (New Patent.)	100s.

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

MAIN SUPPLY FILTER, NO. 40.

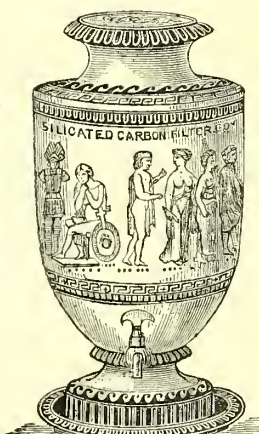


This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

The ordinary Sizes kept in Stock are as follows:—

A, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe	£6 6s.
B, 1-inch pipe	£9 9s.
C, $1\frac{1}{2}$ -inch, $1\frac{1}{2}$ -inch pipe	£15 15s.
D, 2-inch pipe	£26 5s.

PRIZE FILTER, Pattern No. 23.

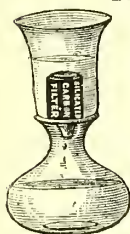


This Filter is constructed in the form and colour of an Etruscan Vase, having inside it a movable pan, into which the Silicated Carbon filtering medium is fitted.

The exterior is made of Porous Ware, which acts with remarkable power as a Refrigerator, keeping the water deliciously cool. Capacity, about Two Gallons.

Price, with Silver-Plated Tap, £3 10s.

TABLE FILTER, NO. 24.



Made in 1, 2, and 3 pint sizes. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.—0, 2s. 6d.; A, 4s.; B, 5s. 6d.
Engraved Vine Pattern—0, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29.

SHAPE OF THIS FILTER AS FIG. NO. 24.
0, 2s. 6d.; A, 4s.; B, 5s. 6d.

Silicated Carbon Blocks.

2 in., 1s. 6d.; $2\frac{1}{2}$ in., 2s. 6d.; $2\frac{3}{4}$ in., 3s.; $3\frac{1}{2}$ in., 4s.; $4\frac{1}{2}$ in., 5s. 6d. each.
SPECIAL QUOTATIONS FOR QUANTITIES.

REFRIGERATIVE CANVAS FILTERS, NO. 32,

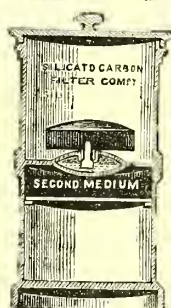
For Hanging in Verandahs, Tents, or Huts, and also for Travelling in Hot Climates.

PRICES—A, 21s.; B, 25s.

A Liberal Discount to the Trade.

NEW DOUBLE-ACTION FILTER, No. 35.

In Cream-coloured Stoneware.



This Filter is specially adapted for rain water, and also for very hard or muddy water. The second medium being protected by a slab, no water can possibly reach it until after passing through the first medium. By this means a double process of filtration is effected, whilst at the same time the impurities contained in the water are deposited on the slab, and may be easily cleansed away with a sponge.

Prices complete—A, 2 gallons, 30s.; B, 5 gallons, 50s.

Extra Blocks supplied for these Filters at 10s. 6d. and 15s. each.

SYPHON FILTERS FOR TRAVELLERS.



By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

From 2s. 6d.

As supplied to the Ashantee Expedition, to Colonel Gordon, C.B., Commanding the Forces in Upper Egypt, to the Army of Roumania, and also to the Egyptian Forces in Abyssinia.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

PARIS: 131 Boulevard Sebastopol.

NEW YORK: 62 Water Street (H. R. Mensing, Agent).

ROBERT GIBSON,
MEDICATED LOZENGE MANUFACTURER,
CARLTON WORKS, HULME, MANCHESTER, AND 1 FINSBURY CIRCUS, LONDON,
MAKER BY STEAM POWER OF MEDICATED AND HIGH-CLASS LOZENGES OF EVERY KIND.
Boiled Sugars, of the Finest Quality, Packed for Home or Export.
Fragrant Bouquet Lozenges, 100 in an Ounce, have an immense sale.

SUGAR WORM CAKES,

Keep in any Climate, give great satisfaction, and have an increasing demand, especially in Africa and Australia. Put up in Tins, each containing 6 Dozen or 12 Dozen Cakes.

Price List, sent by post on application. - Our Goods can be bought through any Wholesale House in London.

THE PATENT CONCINNUM CIGARETTE MACHINE.

AN ELEGANT CHRISTMAS PRESENT.

Enables anyone to manufacture Cigarettes for Sale or own use.

30 from 1 oz. of Tobacco.

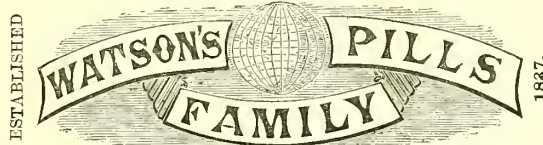
AGENTS:

S. MAW, SON & THOMPSON, AND F. NEWBERY & SONS.

PATENTEES AND SOLE MANUFACTURERS:

EVANS & CO., 60 ST. GEORGE'S RD., PIMLICO, LONDON.

SENT TO ALL PARTS OF THE GLOBE.



These valuable Pills have been established above 40 years, and have proved their value in thousands of cases, and are rapidly increasing in sale.

Sold by most Patent Medicine Vendors in Boxes at 7½d., 1s. 1½d., and 2s. 9d. each, and by

HORACE WATSON,

PHARMACEUTICAL CHEMIST,

LACEBY, GRIMSBY.

TO BE HAD WHOLESALE OF ALL THE LONDON HOUSES

HAVANNAH CIGARS.—1877 CROP.

							Average Weight.	Per 100.
							lb. oz.	
Partagas' Princesas	...	...	...	...	...	...	0 11½	29/6
" Conchas	...	...	...	...	...	...	1 3¾	38/-
" Conchitas	...	...	...	...	...	...	0 15¾	31/6
" Londres Chico	...	...	...	...	...	...	1 1	31/6
" Medianos	...	...	...	...	...	...	1 1¼	31/6
" Queens	...	...	...	...	...	...	0 15¾	31/6
" Regalia de la Reina, Flor	...	...	...	...	...	...	1 2	56/6
Murias' (Antonio) Regalia de la Reina, Flor	...	...	...	...	...	...	1 2¾	48/6
Villar y Villar's Regalia de la Reina, Flor Fina	...	...	...	...	...	...	1 3¾	48/-
" " Regalia del Principe ditto	...	...	...	...	...	...	1 2¾	40/-
Tolosa's Regalia del Principe	...	...	...	...	...	...	1 3¾	32/-
" Regalia Reina, Chica	...	...	...	...	...	...	1 1¾	28/6
" Regalia de la Reina, Flor	...	...	...	...	...	...	1 3¾	40/-
" ditto ditto Flor Fina	...	...	...	...	...	...	1 3¾	42/-
" Victorias	...	...	...	...	...	...	0 14¼	28/-

5% off Monthly Account.—Revised Dec. 10th, 1878.

S. MAW, SON & THOMPSON, LONDON.

BY H.M.'S ROYAL



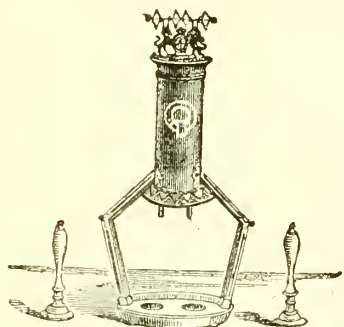
LETTERS PATENT.

TUPHOLME'S PATENT SAFETY APPARATUS,

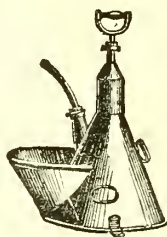
For Drawing off and Measuring Petroleum and other Inflammable Liquids.

In introducing the above Patent Apparatus to the public, the Inventor wishes to call attention to some of the advantages offered. The Patent Safety Measuring Apparatus can be made of any capacity, and adapted for the measurement of any quantity, from a quarter of a pint to a gallon, and every intermediate half pint, or more, if necessary. The principle upon which this Apparatus is constructed, and the great accuracy with which it is finished, ensures exactness of measurement to a few drops; that if a drop or two be pumped in above the desired quantity it is perceptible on the indicator. It combines many advantages, viz., safety, cleanliness, and economy. The space required on counter or floor for fixing a double measure—*i.e.*, for oil and benzoline—is only 12 in. by 16 in. It is constructed to receive all waste liquid back into the storage vessel. It is impossible for the vessel to overflow, for if a greater quantity of liquid is pumped than the measure will hold the excess will return to the storage cistern, thus preventing any danger from the inflammable fluid being allowed to overflow, and in avoiding any smell or vapour. By the slight moving of a handle a check-valve is arranged, to take away all the surplus fluid; thus keeping every drop in the storage cistern, if required. The entire Patent Apparatus will not get out of order, is not liable to breakage, is extremely durable, and, being made in elegant style, enamelled, and tastefully finished, is an ornament to any shop. The liquid can be pumped into the measure, or can be placed at an elevation. These measures can be fixed by any practical plumber, at a small cost. Height of measures, 34 in.; stands, 25 in.

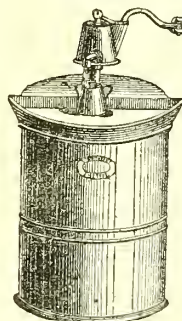
ILLUSTRATED PRICE LIST POST FREE.



No. 3.—Patent Duplex Measure, fixed on Counter, to measure 4 pints. Price, 57/6; single, 42/6.



No. 8.—Force Pump. Will pump any oil to any height required. Brass Cylinder, lifts one quart at stroke of 10 inches. Price 20/-.



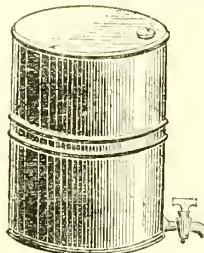
No. 6.

No. 6.—Improved Oil Cistern and Pump, suitable for any oils. The Pump lifts out to pass in, bung-hole of barrel to fill cistern, holds 40 gallons. Price, complete, 37/6.



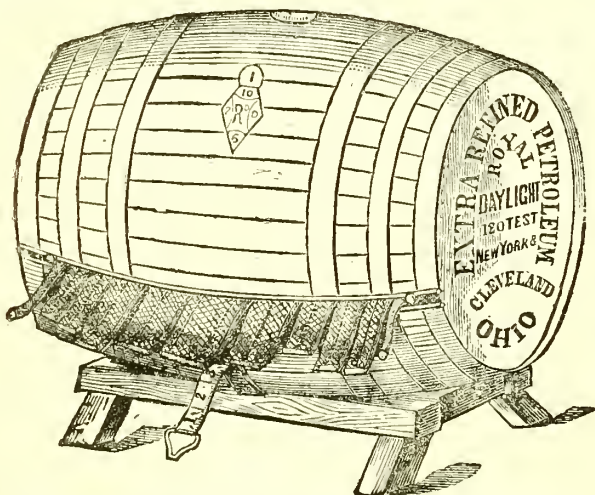
No. 7.

No. 7.—Oil Pump, Brass Cylinder, for any oils. Price, 12/6.

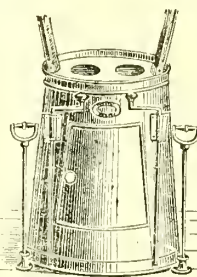


No. 9.

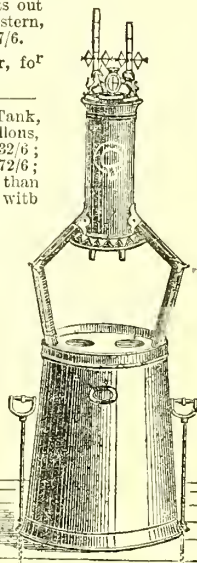
No. 9.—Strong Tinned Iron Oil Tank, brass tap and screw bung:—40 gallons, 15/6; 50, 19/6; 60, 23/6; 80, 26/6; 100, 32/6; 150, 45/-; 200, 55/-; 250, 62/6; 300, 72/6; 400, 85/-; 500, 97/6. Tanks larger than 150 gallons are made extra strong with wood bottoms.



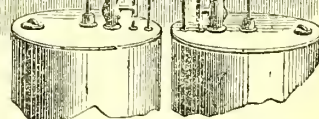
No. 5.—Tupholme's Registered Counter Lamp Wick Holder represents a barrel of petroleum, inside fitted for eleven rolls of lamp cotton, including every size. Attached is a strong tape measure which instantly springs back when not in use. This novelty will be found useful and ornamental; will pay for itself by avoiding waste, keeps lamp cottons clean and tidy, an advertisement to lamp and oil sellers, and occupies but little space on the counter. Size 10 1/2 by 9 1/2 in. Price 12s. 6d.



No. 2.—Patent Duplex Measure, fixed to wall, to measure 4 pints and every intermediate half-pint. Price 65/-; single, 50/-.



No. 1.—Patent Duplex Measure on Stand, the stand forming a closet or receptacle for bottles, dusts, &c. Price 67/6; single, 52/6. Brass Cylinder Force-Pumps, as shown in No. 1, price 17/6. Brass Beer-Full, price 39/-.



No. 1.

ESTIMATES GIVEN TO WHOLESALE DRUGGISTS, OIL MERCHANTS, DISTILLERS, AND REFINERS.

148 INFIRMARY ROAD, SHEFFIELD.

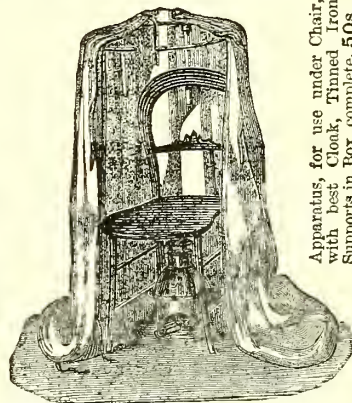
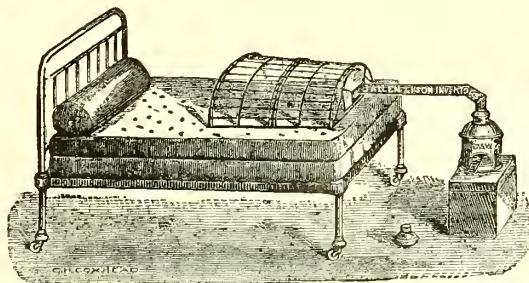
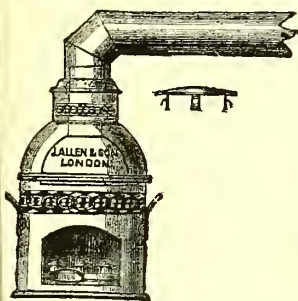
J. ALLEN & SON'S

PORTABLE

TURKISH HOT-AIR AND VAPOUR BATH.

Can be used for Hot Air or Vapour, a Medicated or Mercurial Bath, General and Local Application. Apparatus complete, as Fig. 1, 30s.; Apparatus complete in box, with pair of Wicker Frames for Bed, 45s.

Lancet, February 23, 1878.—"This instrument is very complete, and probably as good a form as can be devised for either a Turkish Bath or a Vapour Bath in a domestic way. What gives great additional value to it is that every precaution has been taken to make an accident impossible. It is portable, and can be packed in a box less than twelve inches square. It is cheap, and it acts promptly."



Apparatus, for use under Chair, with best Clock, Tinned Iron Supports in Box, complete, 50s.

Sanitary Record, July 27, 1877.—"Will be found a luxury, as well as a valuable remedial resource."

London Medical Record, August 15th, 1877.—"The Turkish Hot-Air and Vapour Bath, introduced into use by Messrs. Allen, is really invaluable for safety, convenience, and simplicity."

British Medical Journal, December 8, 1877.—"Possesses in an eminent degree the very desirable qualities of efficiency, portability, and cheapness, thus meeting every requirement."

Medical Press, January 23, 1878.—"Medical men should keep among their stock of Instruments this useful apparatus."

Medical Times and Gazette, September 29, 1877.—"Deserves to be much more widely known and used than it seems to be at present."

Medical Examiner, October 11, 1877.—"It is not, perhaps, going too far to say that such a contrivance as Allen & Son's Portable Turkish Bath should find a place in every well-regulated household."

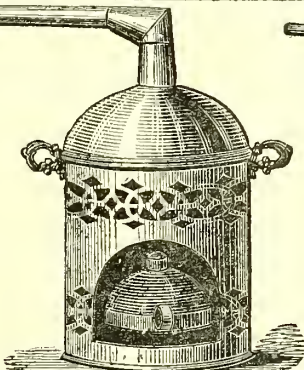
J. ALLEN & SON'S

BRONCHITIS KETTLE,

WITH STAND AND SPIRIT LAMP.

This article has many advantages over the ordinary Bronchitis Kettle. It can be placed on table by side of bed, the patient receiving the full benefit of the vapour.

Price 15s.



J. ALLEN & SON'S

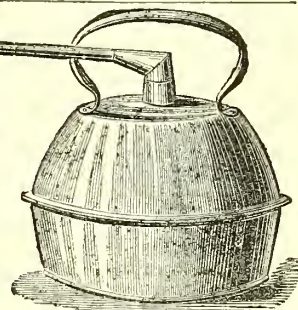
BRONCHITIS KETTLE,

FOR USE OVER FIRE.

Strong, and Seamed together,

Price 7s. 6d.

As recommended by the *Lancet*, *Sanitary Record*, &c., &c.



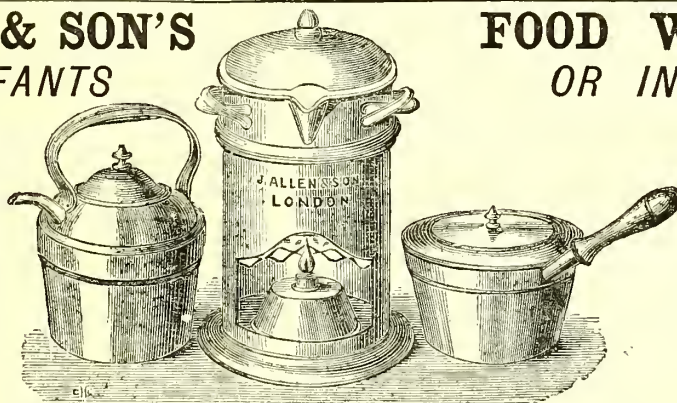
Medical Times and Gazette, March 16, 1878.—"The Kettles are strongly and extremely well made, and they are cheap. We have no doubt that they will be found very handy and of very good service in cases of severe bronchitis, of croup, of tracheotomy, or of any other cases where a humid atmosphere is desirable."

J. ALLEN & SON'S

FOR INFANTS

The Stand is supplied with Pan for Night Light, with which any food can be kept warm, and a Spirit Lamp, by which water may be boiled. Each article as a Panicle for Infants' Food, Saucepan with Wood handle for Liebig's Food, and Kettle for Tea, Coffee, &c. Price, complete,

10s.



FOOD WARMER,

OR INVALIDS.

The most useful, complete, and elegant yet introduced.

Any Night Light can be used.

RECOMMENDED BY
THE CHEMIST & DRUGGIST,
December 15, 1877.
THE PHARMACEUTICAL
JOURNAL,
December 29, 1877.
THE BRITISH MAIL,
Jan. 1, 1878.

Illustrated and Descriptive Catalogue post free for three stamps.

4 & 65 MARYLEBONE LANE, OXFORD STREET, LONDON, W.
WHOLESALE AGENTS—MESSRS. S. MAW, SON & THOMPSON.

OZOKERIT.

PATENTED.

Grand Medal,
MOSCOW, 1872.



Grand Medal,
VIENNA, 1873.

MADE IN ALL SIZES.

At the CENTENNIAL PHILADELPHIA EXHIBITION the highest honours were awarded to

J. C. & J. FIELD

FOR THEIR EXHIBIT OF

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PATENTEES & ORIGINAL MANUFACTURERS

OF

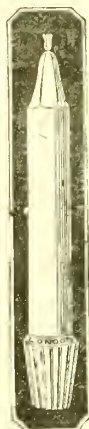
SELF-FITTING CANDLES.

Made in all Sizes. | Made in all Colours. | Burn to the End. | Require no Scraping.
Made in all Qualities. | Fit all Sockets. | Require no Cutting. | Are Safe, Economical, Cleanly.

CANDLES SPECIALLY ADAPTED FOR EXPORTATION TO HOT CLIMATES.

OZOKERIT (Patented). In handsome 1-lb. Packets.

These beautiful Candles are made in ALL SIZES, and from their great hardness and non-liability to bend when exposed to a high temperature, are well adapted for Ball Rooms and Tropical Climates. They possess the highest illuminating power of all descriptions of Candles.



UNITED SERVICE SOAP,

Of highly emollient properties, and singular durability of Perfume.



Tablets 5 to 1b.

TRANSPARENT GLYCERINE TABLETS, TRANSPARENT HONEY TABLETS, BROWN WINDSOR, and all FANCY TOILET SOAPS,

In Tablets, Squares, or Bars, and in all qualities.

EMOLLIENT "STOCKHOLM TAR SOAP,"

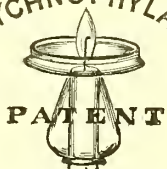
Very detergent, and a powerful disinfectant.

NIGHT LIGHTS, WAX MORTARS, DISH-WARMERS, LIGHTING-WICK BOUGIES, WAX and TRANSPARENT TAPERS, &c.

CARRIAGE CANDLES in Wax, **LYCHNOPHYLAX** **OZOKERIT**, & Stearine, all sizes.

PATENT CANDLE GUARDS.

These Glasses (made to fit 4's and 6's only) more effectually prevent the Guttering of Candles than any article ever introduced.



PATENT

Specially adapted for Ball-rooms, Churches, &c.

PATENT SAVE-ALLS & CANDLE-CUTTERS for use with these.

Full particulars, with drawing, sent on application.

Wholesale Detailed Price Lists of

J. C. & J. FIELD, PATENT CANDLE WORKS, LAMBETH MARSH, LONDON, S.E.

IMPORTANT NOTICE TO CHEMISTS.

Owing to the unscrupulous methods and false assertions employed by an irresponsible vendor of India Rubber Porous Plasters, we feel constrained to state that our

INDIA RUBBER POROUS STRENGTHENING PLASTERS

are guaranteed not to contain a single atom of Lead or any other ingredient calculated to injure the consumer; on the contrary, **THEIR COMPOSITION IS PURE VEGETABLE**; in quality and general appearance they are unsurpassed by any maker, and can be obtained by the gross at £1 16s., less 10 per cent.

THE "LANCET."

"Messrs. SEABURY & JOHNSON have produced a list of Plasters, all made with India Rubber as a basis, which are elegant, stick well, are flexible, easily adapting themselves to the folds of the skin, occasion no inconvenience to the patient, and have the appearance of being made with faithfulness to the British Pharmacopoeia. One Plaster worthy of especial praise is the Salicylated Isinglass it is flexible, and on being slightly wetted makes a good adhesive plaster for surgical purposes."

THE "MEDICAL PRESS AND CIRCULAR."

"Among more recent and valuable Pharmaceutical improvements we would draw the attention of the reader to an elegant and convenient lot of Plasters prepared by SEABURY & JOHNSON. We have recently tried some of them, and find them to be, severally, very neat, clean, and efficacious preparations. India Rubber has been used as a base in the preparation of the Plasters, by which means the medicinal substances used are protected. With regard to their therapeutical efficacy, and the style in which they are got up, we can speak from experience. Among the other Plasters which have given us great satisfaction, we may mention those in which *Belladonna* and the *Spanish Fly* are, respectively, the chief ingredients."

"LONDON MEDICAL RECORD."

"Messrs. SEABURY & JOHNSON, of 28 Red Lion Square, London, have forwarded to us a series of Plasters made in a style which deserves warm praise. All of them are of the best make that we have yet seen, and, taken as a series, constitute a considerable improvement in the manufacture of Medicinal Plasters, of which surgeons and physicians will, on inspection, easily realise the value. Their Salicylated Isinglass Plaster, spread on strong waterproof cotton cloth, and applied by wetting, is the best surgical adhesive plaster which we have seen. The plaster itself is made of pure gelatine, and is antiseptic in character; it adheres firmly and closely on being wetted with a sponge; it does not spoil in any climate. It is obviously from its manufacture calculated to last much longer than the ordinary adhesive plaster. The Mustard Plaster, the Capsicum Plaster, India Rubber Blister Plaster, and Pitch Plasters are all equally deserving of commendation."

The "British Medical Journal," "Medical Times and Gazette," "Chemist and Druggist," and many of the Provincial Medical Journals have noticed our productions as worthy of special commendation. Our improved Pharmacopoeia and Surgical Plasters in India Rubber combination overcome all objections found in the use of plasters, and present the following advantages and qualities, which will be appreciated by every Physician, Surgeon, and Chemist:—

Perfect Cleanliness and Reasonable Price.
Perfect Pliability in any temperature.
Adhesion without Heat or Moisture.
Combined India Rubber Prevents Decomposition.

Being Porous they do not slide or move, thereby ensuring increased local action.
They remain serviceable longer than other plasters.
India Rubber Preserves the incorporated Extract or Drug.

Our Mustard Plasters are spread on Cotton Cloth instead of Paper.

Our Isinglass, Court, Corn, and Bunion Plasters are all spread with Chemically-pure Fish Gelatine incorporated with Salicylic Acid. Fish Isinglass treated by our method of purification ensures an article that adheres quickly by the application of the slightest moisture; in addition to its more susceptible and greater adhesive properties it is rendered antiseptic.

Every Pharmacopoeia Plaster guaranteed to be of Official Strength. We also manufacture in addition to our list of India Rubber Plasters, in the most approved form and improved quality, Mustard, Silk, Isinglass, Medicinal, Corn, Bunion, and Court Plasters in great variety.

If our India Rubber Porous Strengthening Plasters possess any superiority over similar articles it is owing to an increased local action. All Porous Plasters are packed two dozen in a box, and are fully warranted to give perfect satisfaction. We quote a few of the more prominent kinds, subject to 10 per cent. discount monthly.

Size, 7½ x 5.	Per doz.	Per gross.	
India Rubber Porous Strengthening Plasters	4 0	£1 16 0	Surgeons' Rubber Adhesive Plaster, 7 in. x 1 yd. . . Per doz. Rolls £0 17 0
" Arnica	4 0	2 4 0	Mustard Leaves (10 in a box), on Cotton Cloth . . . Per doz
" Aconite	5 0	2 17 0	" " (6 in a package) " " " 0 6 0
" Belladonna (B.P.)	4 6	2 11 0	" " (3 in a package) " " " 0 3 0
" Capsicum	4 0	2 17 0	" Plasters, yard Rolls, 6 x 36 " " " 0 10 0
" Opium (B.P.)	7 0	3 16 0	" 4-yard Rolls, 6 x 18 " " " 0 6 0
" Poor Man's	4 0	2 4 0	Salicylated Isinglass Plaster, 5-yard Rolls . . . Per Roll 0 5 0
" Burgundy Pitch (B.P.) Plasters	4 0	2 4 0	" " " " " " " 0 1 3
" Warming (B.P.)	5 0	2 17 0	India Rubber Porous Strengthening Plasters, in 5 yard Rolls, 5 in. wide . . . Per Roll 0 6 3
" Belladonna Plaster (B.P.), 7 in. x 1 yd. . . Per doz.	1 7 6	1 7 6	Ditto ditto in yard Rolls, ditto ditto . . . Per doz. 0 17 0
India Rubber Blister Plaster (B.P.), 7 in. x 1 yd. . . Per doz. Rolls	1 7 6	1 7 6	India Rubber Porous Belladonna Plasters, in 5 yard Rolls 5 in. wide . . . Per Roll 0 8 6
India Rubber Capsicum Plaster	"	"	

BENSON'S CAPSICUM POROUS PLASTER,

The most active external remedy known, is a great improvement on the slow action of the ordinary Porous Strengthening Plaster, and was specially recommended by American Medical Jurors, as an article of genuine merit. Per dozen, 8s. 6d. 10 per cent. discount.
Our goods can be obtained from all Wholesale Druggists, Patent Medicine Dealers, and Druggists' Sundriesmen. Complete Price Currents of our Plasters sent to any address on application. Inquiries and correspondence promptly answered.

SEABURY & JOHNSON, 11 Jewin Crescent, Aldersgate Street, E.C.

LORIMER & FLETCHER,

NORTH LONDON CHEMICAL WORKS,
HOLLOWAY ROAD, N.

MANUFACTURERS OF

FERRI ET AMMON. CITRAS.

FERRI ET AMMON. TART.

FERRUM TARTARATUM.

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FERRI ET QUINIAE CIT. COML.

FERRI ET QUINIAE CIT. AMORPH.

FERRI ET CINCHONIN. CIT.

FERRI ET CINCHONIDIN CIT.

AND

ALL OTHER SCALE PREPARATIONS.

BISMUTHI SUBNIT.

BISMUTHI CARB.

BISMUTHI OXID.

LIQUOR BISMUTHI, B.P.

These Preparations of Bismuth are warranted free from Silver, Arsenic, and other impurities.

LITHIAE CARBONAS.

LITHIAE CITRAS, B.P.

SYR. FERRI PHOSPH. COMP. (PARRISH).

This Syrup is of unexceptionable quality, and is guaranteed to retain its brilliancy in any climate.

SYR. FERRI ET QUINIAE ET STRYCHNIAE PHOSPH. (EASTON).

SYR. FERRI ET CALCIS LACTOPHOSPH.

SYR. FERRI ET CALCIS HYPOPHOSPH.

SYR. FERRI IODIDI, B.P.

PEPSIN PUR. B.P.

PEPSIN PORCI.

PEPSIN PORCI (SCHEFFER'S).

PRICES ON APPLICATION.

WHOLESALE BUYERS ONLY SUPPLIED.

SODA WATER MACHINES.

ILLUSTRATED CATALOGUES FORWARDED FREE.

Our Machines are universally adopted throughout the world for the manufacture of all kinds of aerated drinks whether in bottles, syphons, or counter fountains. There are in England alone over 1,000 factories where our Machinery is in use. They are the simplest, safest, and cheapest for the purpose, and produce a highly-charged gaseous water free from foreign contamination. We also recommend Codd's Patent Globe-stoppered Bottle, as it dispenses with the continual expense of *corks, wire, string, and skilled labour*; in fact, the labour required is brought to a minimum.

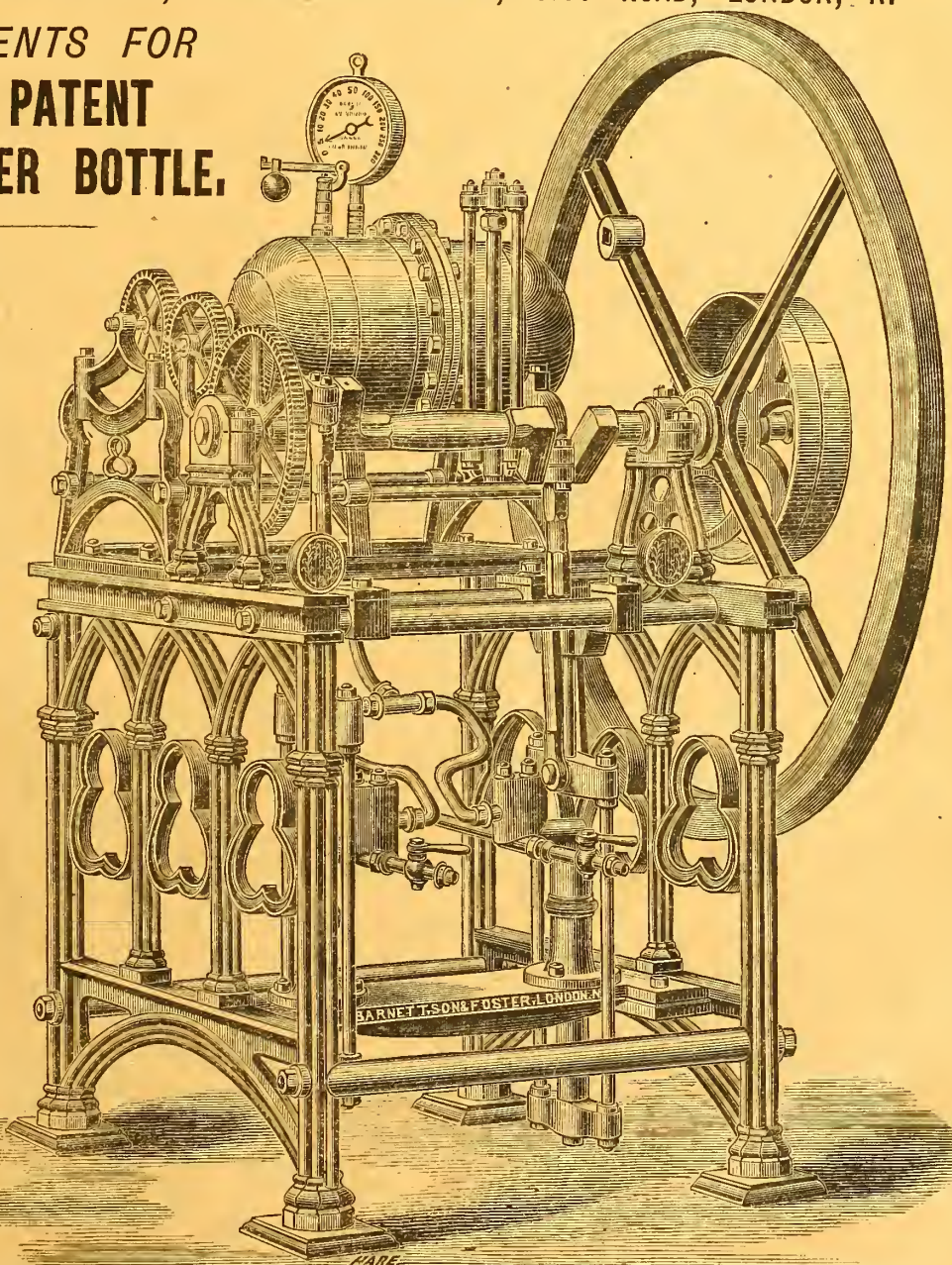
The full operations of factories in different parts of the United Kingdom can be seen at any time upon application to us, where our Machines and means of filling the Patent Bottle can be seen; or, if preferred, at our establishment a Soda Water Machine and accessories are always ready at work.

BARNETT, SON & FOSTER,

23T FORSTON STREET, SHEPHERDESS WALK, CITY ROAD, LONDON, N.

SOLE AGENTS FOR
CODD'S PATENT
SODA WATER BOTTLE.

This Bottle for containing Gaseous Liquors is, without doubt, the only one that contains all the essentials to make it perfect, and it is, therefore, no wonder that over 500 Mineral Water Manufacturers have given up all other kinds to the exclusion of this.



PRIZE MEDALS: LONDON, 1862, 1873, 1874; VIENNA, PARIS, 1867; PHILADELPHIA, CAPE, PARIS, 1878.

INGRAM & ROYLE,

IMPORTERS OF NATURAL MINERAL WATERS, &c.,

119 QUEEN VICTORIA STREET, LONDON, E.C.

Warehouses: 226 and 227 UPPER THAMES STREET, E.C.

CITY DEPÔT FOR THE APOLLINARIS WATER.

		IN LONDON.		COUNTRY (carriage paid).	
Loose, 50 glass bottles ..	22/	24/	Cases extra.		
Do. 100 " 1/2 ..	35/	35/			
Per Hamper of 50 glass bottles ..	23/	25/			
Do. do. 100 " 1/2 ..	36/	39/	Hampers included.		
Do. do. 50 stone " ..	22/	25/			
Do. do. 50 " 1/2 ..	17/6	20/			
Per dozen, glass or stone ..	6/3	bottles, 5/ 1/2 bottles.			

5 per cent. discount on orders for 20 Hampers or Cases, or the equivalent loose. Smaller quantities strictly NET CASH. Apollinaris Bottles and Cases allowed for when returned.

NAME.	Per Dozen.	Per Orig. Pkg.	
BILIN	9/	36/	1/2 Bots.
BIRMENSTORF	12/	44/	1/2 Bots.
BOURBOULE, LA	11/	42/	1/2 Bots.
CARLSBAD	9/6	38/6	1/2 Bots.
EMS	8/	30/	1/2 Bots.
†FRIEDRICHSHALL	11/	7/6	*26/
†HUNYADI-JÁNOS	16/6	13/6	*30/
KISSINGEN	11/6	45/	*50/
KREUZNACH	11/	26/	1/2 Bots.
MARIENBAD	10/	40/	1/2 Bots.
MISSISSQUOI	25/	50/	1/2 Bots.
OREZZA	12/	28/	1/2 Bots.
PULLNA	12/	8/6	*36/
ROISDORF	5/6	21/	1/2 Bots.
ROYAT	9/	34/	1/2 Bots.
SAINT GALMIER (Natural)	5/6	21/	1/2 Bots.
SCHWALBACH	8/	6/	30/
SELTZER	6/	4/	22/
TARASP	12/	48/	15/6
VALS	8/6	32/	1/2 Bots.
VICHY (Sources de l'Etat)	8/6	7/6	31/
WILDUNGEN	11/	43/	27/
WOODHALL	7/6	5/	*20/

TERMS.—21% discount on Hunyadi-János and 5% discount on all other Waters and Salts for prompt cash only, or Quarterly accounts less 2 1/2 %.

† FRIEDRICHSHALL:—10 cases and upwards shipped direct from Rotterdam at Reduced Prices, which can be had on application.

† Special discount on Hunyadi-János on orders for 10 cases.

SALTS, &c.

	bottles	Per doz.
Carlsbad	84/	
Do.	42/	
Do.	21/	
Kreuznach	11/	
Do.	60/	
Marienbad	24/	
Vichy (for Drinking)	42/	
Do.	42/	
Do. (for Baths)	10/	
Vichy Pastilles (assorted flavours)	12/	
Do.	6/	
Do. "Sucre d'Orge" (Barley Sugar) .. large "	18/	
Do.	9/	
Ems Pastilles	12/	
Carlsbad do.	12/	
Do. Soap	12/	
Kreuznach Motherlye	11/	
Woodhall do.	4/3 per gallon.	

CONTENTS OF ORIGINAL PACKAGES.

*Friedrichshall .. 30 Bots. 60 1/2 Bots.	*Missisquoi .. 24 Bots. — 1/2 Bots.
*Hunyadi-János 25 " — " "	*Orezza .. 30 " — " "
*Kreuznach 30 " — " "	*Pullna .. 40 " — 40 "
*Woodhall 36 Bots. 72 1/2 Bots.	

With the above exceptions, Original Packages contain 50 bottles each.

PRICE LIST OF ALL IMPORTED NATURAL MINERAL WATERS ON APPLICATION.

GADBURY'S COCOA ESSENCE

excess of fatty matter, and recommended by medical men as the most wholesome breakfast beverage.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

DO NOT LET YOUR CHILD DIE!

Fennings' Children's Powders Prevent Convulsions; are Cooling and Soothing.

FENNINGS' CHILDREN'S POWDERS,

For Children Cutting their Teeth, to Prevent Convulsions.

Sold in Stamped Boxes, at 1s. 1 1/2d. and 2s. 9d. (great saving), with full Directions.

Do not contain Calomel, Opium, Morphia, nor anything injurious to a tender babe.

Chemists, by applying to the Patent Medicine Houses and Wholesale Chemists, can obtain, free of any charge, a supply of "FENNINGS' EVERY MOTHER'S BOOK," for Counter distribution.

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In use by nearly 600 Mineral Water Makers.

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Name embossed on side of glass, 2d. each.
Stencil, 3s. to 5s.